

Modern

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JUL 19 1960

TECHNOLOGY
DEPARTMENT

LITHOGRAPHY

Bidding on AMS Contracts

Story of Gateway Press

Survey of Dampening

Report on TAGA Meeting

Census Shows Litho Gains

Q. and A. on MICR

In this issue

JULY, 1960



"This Dual-Lith is our 'million dollar baby!'"

says Irv Solomon, President, Tru-Tone Impressions, New York

Fifteen months ago, Tru-Tone Impressions, New York, replaced three presses with a single Model 233 Dual-Lith, and still maintained a handsome yearly gross of \$1,000,000! "In fact," says Mr. Solomon, "it's allowed us to take on many small printing jobs we couldn't run economically on larger presses. We can do a complete make-ready change-over in ten to fifteen minutes - and there's less downtime for maintenance on Dual-Lith than any other press. Wash-up is particularly easy too. And printing quality is tops!"

Small jobs are only part of the story at Tru-Tone. Their Dual-Lith is also used for eye-catching four-color work. And press-runs of up to one million quality impressions have been maintained.

"The versatile Dual-Lith," says Mr. Solomon, "is the 'workhorse' of my printing operations!" How many different jobs could the economical Dual-Lith

perform in your shop? You can find out. Just fill in the coupon for FREE booklets.

FREE! BOOKLETS TELL ALL ABOUT DUAL-LITH



DAVIDSON CORPORATION

subsidiary of
Mergenthaler Linotype Company
29 Ryerson St., Brooklyn 5, N. Y.

Yes, I'd like to know more about
Dual-Lith. Send free booklets and
case histories to:

Name

Company

Address

City Zone State



65"
69"
72"
73"
76"
77"

You'll find them all at the Roberts & Porter branch near you: Harris Alum-O-Lith presensitized plates in the BIG sizes . . . including the world's first 77" plate.

Now, no matter what the size of your offset press, you can make the most of the advantages of presensitized plates. Free demonstration in your plant: call your R & P representative now.



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More Ink Value Per Pound **OFFSET**

Speed Spectrum

a new quick set ink line plus an easy color matching service

Never before has this combination been available to the lithographic industry . . . an instant setting ink in combination with Crescent's popular time—and cost-saving Spectrum Service. See what they'll do for you. You'll want complete information from your Crescent representative.

Speed Spectrum Inks + ***Spectrum Service***

■ Provides quick set characteristics for offset printing on carton, coated and other offset papers . . . in black and white, process, and all other colors, too.

■ Sets instantly on the coated stocks, and only slightly slower on uncoated stocks. Provides brilliant glossy color with minimum dry back. Colors maintain their sparkle when dry.

■ Fast work and turn practically eliminates offset in the pile. Sheets can be piled high in the delivery.

■ Soft bodied, no need to manipulate on press.

■ Prints all kinds of forms superbly, solids with small reverses, or halftones, on most any stock.

■ Excellent water resistance and ink transfer, superior trap qualities on two-color and four-color presses.

THESE SAME ADVANTAGEOUS QUALITIES ALSO AVAILABLE IN LETTERPRESS FORMULATIONS.

■ Color matching is easy and certain.

■ Minimum ink inventory to meet practically all color requirements.

■ Uniform color match on re-runs.

■ Fast service, by wire or telephone, cuts unproductive press downtime.

■ Spectrum Service was introduced to the trade by Crescent, making speedy color matching a reality. Printers who have built up their own color library of Spectrum Service formulae are saving money and clearing their shelves of half-used ink cans.



464 North 5th St., Phila. 23 • 3901 West Rohr Ave., Milwaukee 9 • 1040 Grant St., S.E., Atlanta 15 • KELCO DIVISION: 716 Sidney St., St. Louis 4, Mo.

Look to Crescent for Ink Leadership
Inks for Letterpress • Lithography • Flexography • Rotogravure



Cover

Two scenes at Gateway Press, Louisville, Ky., which is celebrating its 10th anniversary this month, with a big expansion of the plant. For complete story on this group of "just ordinary lithographers," turn to page 30.

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Feature Articles

- Bidding for AMS Map Contract Work..... 28
By Mike Geary
- Gateway Press: 'Just Ordinary Lithographers'..... 30
- Water, Water, Everywhere . . . Survey of Dampeners..... 32
By Charles Shapiro
- Dampening . . . Lithographers Still Have Problems..... 35
- TAGA Hears Papers on Electronics..... 36
- NAPL Dispatches Six Sentinels After Quality Control..... 39
- Litho Growth Shown in Census (Conclusion)..... 40
By Cyril M. Wildes
- Questions and Answers on MICR..... 43
- Litho Brilliant in Chicago Design Show..... 44
By H. H. Slawson
- What Motivations Keep an Employee Happy?..... 45
By Leslie E. Munneke
- Research for Web-Offset..... 47
By Hyman Safran
- Stamps: Two Billion Lithographs a Year!..... 48
By Tom Burrier
- Lithographer in Houston Produces 'Adventure Map'..... 51

Departments

- Editorials 27
- Meeting Calendar 51
- Letters to the Editor..... 51
- Production Clinic 53
By Frank Arbolino
- Technical Section: Ink Emulsification Test..... 55
- Metal Decorating Section..... 61
- Photographic Clinic 65
By Herbert P. Paschel
- Litho Club News..... 73
- News About The Trade..... 77
- Equipment, Supplies, Bulletins 123
- Classified Advertisements 137
- Local Buyers' Guide..... 139
- Index To Advertisers..... 141
- Tale Ends 142

MODERN LITHOGRAPHY

VOLUME 28, NUMBER 7

JULY, 1960

SUBSCRIPTION RATES: One year, \$4.00; two years, \$7.00. Canada and Pan America, one year, \$5.00; two years, \$9.00. Foreign, one year, \$9.00; two years, \$15.00. Group subscription (U.S. only) Four or more entered as a group, \$2.50 each, (Canada: \$3.00) (May be sent to different addresses.)

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PUBLISHED MONTHLY on the 5th by Industry Publications, Inc., Publication office: Box 31, Caldwell, N. J. Advertising rates made known on application. Closing date for copy—5th of the month preceding month of issue. Second class mailing privileges authorized at Caldwell, N. J., with additional entry at New York, N. Y.

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Litho-perf
PAT. NO. 2,842,202

... HELPS YOU SHARPEN YOUR PENCIL
ON OFFSET BIDS WITH PERFORATING

PERFORATE ON OFFSET PRESSES WITH YOUR REGULAR LITHO RUN. This tiny flexible steel band is so small that you can hardly believe that it will give you thousands of perforations . . . trouble free, on your regular litho run!

Litho-perf is applied with a special tape to the impression cylinder so that you can perforate simultaneously with the printing impression. It only takes minutes to apply and you save an extra operation.

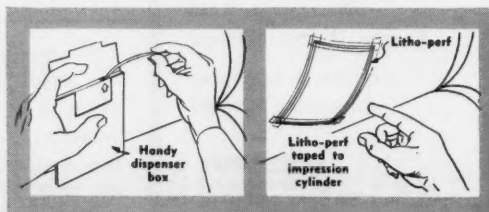
Perforate across the cylinder, around the cylinder, or at any angle; as many places as necessary. No costly attachments.

Litho-slit rule now available. Now you can cut out windows, cut off corners or cut slots on regular offset runs.

Litho-perf "snap-out" rule lets you print forms and snap-out perforate them on the same litho run.

Litho-score for jobs on heavy stock that have to be scored before being folded . . . score on the regular litho run.

PRICES: Six foot strip in dispenser box, tape included \$5.40 Twenty foot strip in dispenser box, tape included \$16.20.



SOLD BY LEADING
SUPPLY HOUSES

MANUFACTURED BY
H. S. BOYD COMPANY
TULSA, OKLA., U. S. A.



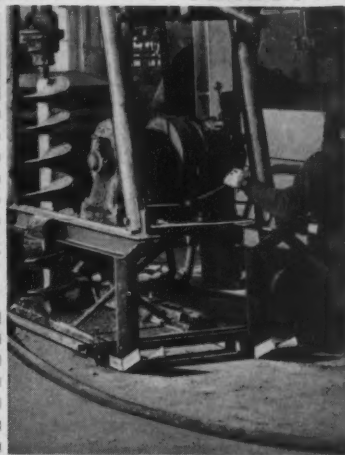
Again... press-proved precision with...

hi-fi

OFFSET BLANKETS

REPRODUCTION WITH BLANKET "A"

REPRODUCTION WITH HI-FI BLANKET



A split run using two different blankets was used in turning out this brochure describing a printer's new facilities. You can see at a glance the superior quality of the HI-FI Blanket's work.

Why settle for less than a HI-FI Blanket offering...

- Ultra-precision "micro-textured" surface for ultra-precision reproduction
- Shorter break-in to start with—greater mileage in the long run
- Quicker wash-up with no pumice needed
- Better smash-resistance—faster comeback after each

impression—superior resistance to stretching

- Standout work with any type paper or on metal
- A premium blanket at the same price as ordinary blankets

For the rest of the remarkable HI-FI Blanket story, see your Goodyear Distributor. Or write Goodyear, Printers Supplies Sales Dept., New Bedford, Mass.

Lots of good things come from

GOOD YEAR

INDUSTRIAL PRODUCTS

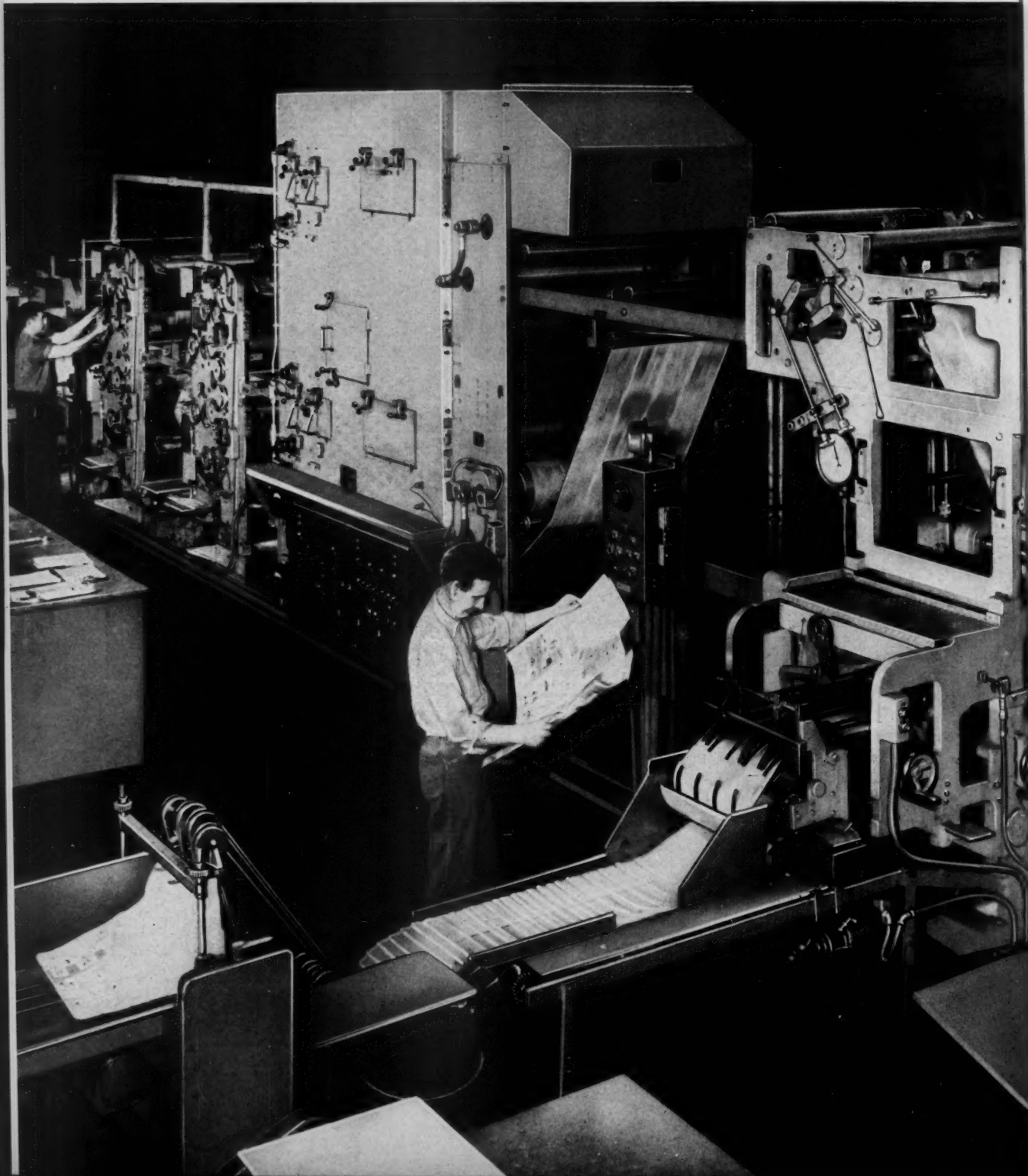
Illustration courtesy of William Fether Company, Cleveland, Ohio

HI-FI—T. M. The Goodyear Tire & Rubber Company, Akron, Ohio

MODERN LITHOGRAPHY, July, 1960


Danner Press of Canton


This is the new 22½ x 35" ATF Press at Danner. Two printing units and a second high-speed folder are being added to this press.





speeds production with ATF Web Offset Publication Presses

Millions of copies of periodicals are printed, bound, addressed and mailed every month by this 275-man Ohio plant. All their presses are web-fed. At key spots in the Danner operation are two 22 $\frac{3}{4}$ x 35" ATF Offset Publication Presses.

The older of the two— a four-unit web-fed press—was purchased in 1948; and, according to Danner, "it is the real workhorse of our plant." This ATF press has unusual versatility. It has an ATF magazine folder at each end of the press and each printing unit can be fed with a roll of paper from the side. A roll can thus be run through just one printing unit, or two, three or four as per number of colors required, or additional rolls can be run to increase the number of signature pages.

 A new two-unit 22 $\frac{3}{4}$ x 35" ATF Publication Press was installed in January 1959. It handles most jobs at a net production of 18,000 signatures per hour; however, Charles Cheviron, Pressroom Superintendent, reports: "It runs very satisfactorily at higher speeds, too." This press is equipped with ATF's new High-Speed Folder and a packer which speeds the handling of the printed and folded product.

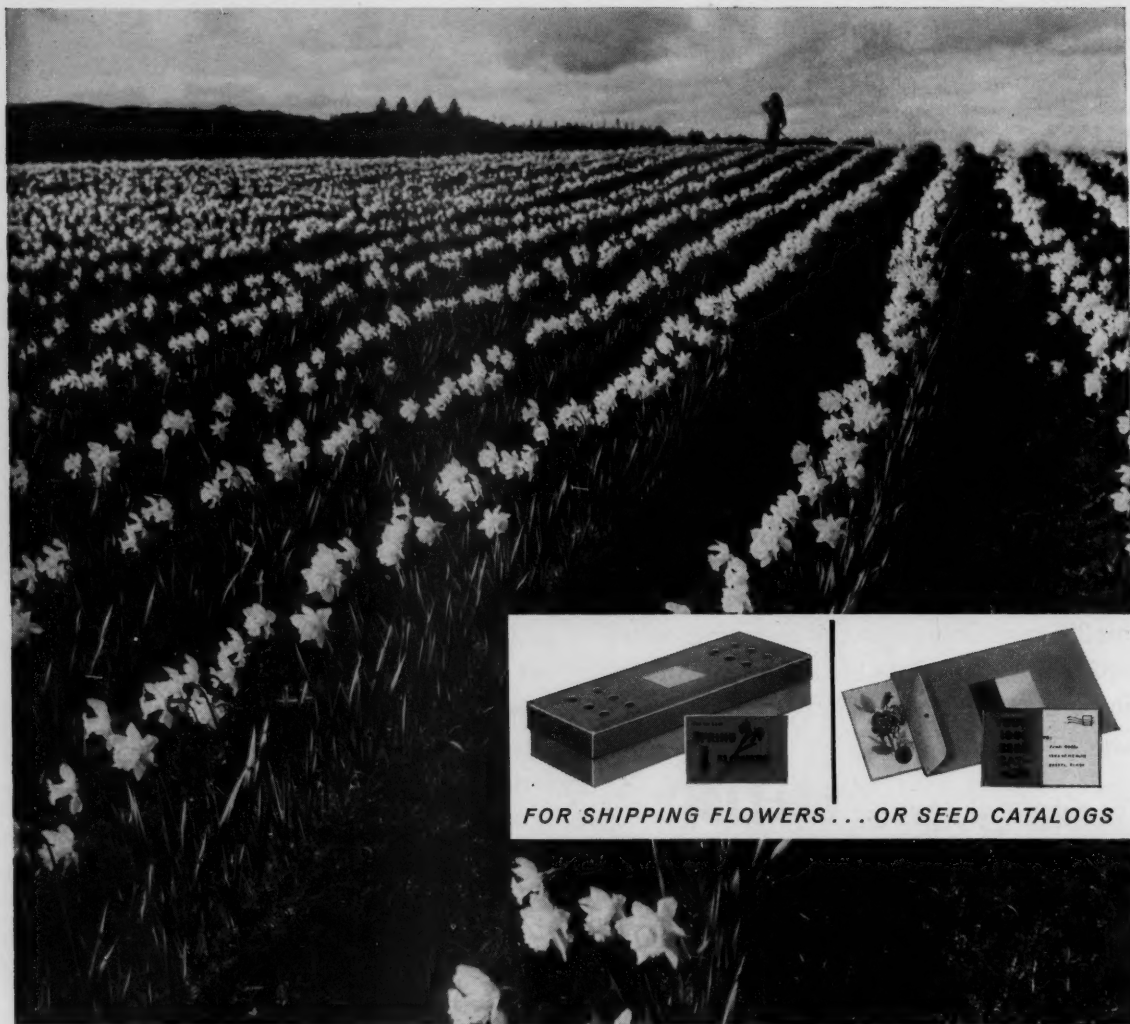
These ATF   Presses are helping Danner print several dozen magazines, catalogs, children's books, booklets and many other types of work. An indication of the volume: an employee of the post office is stationed permanently at the plant to process mailings, and two carloads of paper are unloaded daily at their siding.

Find out how ATF Publication Presses can help you boost your volume of production—and profits.
Write for illustrated brochure.



AMERICAN TYPE FOUNDERS

200 Elmora Avenue, Elizabeth, N. J.



Whether on a corrugated container for fresh flowers or on a seed catalog, Ludlow Label Papers are the kind of salesmen that make a lasting impression by sticking to their jobs. Ask your paper merchant.

Best for Any Surface . . . Ludlow Label Papers

M-J Gummed Label Papers, Coated and Uncoated.

ELEET Dot-Gummed Label Papers.

DRY-STIK Pressure-Sensitive Paper.

OLD TAVERN Gold and Platinum Label Papers, Gummed and Ungummed.

GLASSAD Label Paper for Gummed Side Printing.

LUDLOPAKE the whiter, brighter, high-opacity label paper.

Also, these Ludlow specialty papers: Old Tavern Gold and Platinum Cover and Box Cover, Super Cover, Relyon Reproduction Paper. Ludlow Papers, Ware, Massachusetts, Dept. 175.



Your Widest Selection of Printable Label Papers

NEW ANSCO GRAPHIC ARTS SAMPLES

tailored to your needs

Free
on request



Anso

Graphic Arts Materials

Interested in improving your overall photographic quality? Here's your opportunity. This new Anso Graphic Arts Sampler will be tailor-made to suit your needs in both black-and-white films and chemicals. So just fill in and mail the coupon. Soon you'll be testing the best . . . Anso!

FREE! Illustrated booklet of case histories where graphic arts and photography have helped increase business efficiency. Wouldn't you like a copy for yourself? See your Anso representative. Anso, Binghamton, N. Y., A Division of General Aniline & Film Corporation.

Anso, Dept. 1
Binghamton, New York

YES! I want to make a critical test of Anso Graphic Arts Materials. Please arrange to supply me with your Graphic Arts samples.

NAME _____

POSITION _____

COMPANY _____

TELEPHONE No. _____

ADDRESS _____

CITY _____ STATE _____

B



S. D. Warren announces

FotoPlate 8

**for small
offset presses**

8½ x 12 to 17 x 22

- **Negative-working, presensitized** • **16 plate sizes**
- **Priced from 12¢ to 54½¢**

**Here is a new duplicator plate
that helps the small press operator 8 ways**

- 1. Low Cost.** See complete price list on opposite page.
- 2. Short Exposure:** FotoPlate 8 uses a fast sensitizer to reduce exposure time.
- 3. High Quality Reproduction.** Grease-receptive image on FotoPlate 8 produces high-quality reproduction of type, solids and halftones.
- 4. Easy Development.** FotoPlate 8 can be placed on press with no prior developing, or can be processed with Warren's FotoPlate Developing Ink.
- 5. Fast Roll-Up.** New sensitizer provides greater affinity for ink. Result: faster roll-up, less waste, short-cut processing.
- 6. Plastic Grain.** Fine-grained plastic surface of FotoPlate 8 is designed for clean running and faithful reproduction of copy.
- 7. Press Stability.** Caliper is a sturdy .008". This provides stability and easy handling on press.
- 8. Sensitized One Side Only.** This permits 100% use of plates, with less spoilage than with two-sided plates.

For full information — and a demonstration — of new FotoPlate 8, contact any of the distributors listed below:

Albuquerque, N. M.
Jones Graphic Products Co.

Atlanta, Ga.
M & F Supply Company, Inc.

Baltimore, Md.
George R. Keller, Inc.
Phillips & Jacobs, Inc.

Baton Rouge, La.
Sograph, Inc.

Boston, Mass.
Bridgeport Engravers Supply Co., Inc.
Pitman Sales Co. of New England, Inc.
W. Oliver Tripp Company

Buffalo, N. Y.
Marks & Fuller, Inc.

Charlotte, N. C.
George R. Keller, Inc.

Chicago, Ill.
Bridgeport Engravers Supply Co., Inc.
Chicago Litho Products Co.
Harold M. Pitman Company

Cincinnati, Ohio
G. C. Dom Supply Company
McKinley Litho Supply Co., Inc.

Cleveland, Ohio
Bridgeport Engravers Supply Co., Inc.
Cleveland Litho Graining & Supply Co.

Columbus, Ohio
Salem Graphic Supply Co.

Dallas, Texas
Lew Wenzel and Co. of North Texas
Litho Offset Supply Co.

Dayton, Ohio
Salem Camera Company

Denver, Colo.
Lew Wenzel and Co. of Colorado

Detroit, Mich.
Garrick Photo Supply Co.
Lithomaster Company

Houston, Texas
L. H. Kelley Company
Lew Wenzel and Co. of South Texas

Indianapolis, Ind.
Modern Photo Offset Supply, Inc.

Kansas City, Mo.
Wenzel Equipment Company

Los Angeles, Calif.
The California Ink Company, Inc.
Smart Supply Co., Inc.
Lew Wenzel and Co. of Southern California

Louisville, Ky.
Reliable Lithographic &
Offset Supply Co.

Milwaukee, Wis.
Reimers Photo Materials Co.

Minneapolis, Minn.
T. K. Gray, Inc.
Litho Supply Depot, Inc.

Morris, N. Y.
Associated Graining Company

Nashville, Tenn.
Southeastern Printing Ink, Inc.

Newark, N. J.
Globe Printers Supply Co.

New Orleans, La.
Printers Supply Mart

New York, N. Y.
Chemco Photoproducts Co., Inc.
Harold M. Pitman Company
Roll-O-Graphic Corporation

Peoria, Ill.
Lens & Camera Co.

Philadelphia, Pa.
Penn Dell and Company
Phillips & Jacobs, Inc.

Pittsburgh, Pa.
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Portland, Me.
Northeastern Composition Co.

Portland, Ore.
The California Ink Co., Inc.

Rochester, N. Y.
Marks & Fuller, Inc.

St. Louis, Mo.
Rissmann Graphic Arts Supply Co.

San Antonio, Texas
Texas Type Foundry

San Francisco, Calif.
The California Ink Company, Inc.
Lew Wenzel and Company

Seattle, Wash.
The California Ink Company, Inc.

Secaucus, N. J.
Harold M. Pitman Company

Toledo, Ohio
Toledo Lithograin and Plate Co.

Tulsa, Okla.
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Washington, D. C.
George R. Keller, Inc.

Winston-Salem, N. C.
Young-Phillips Sales Co.

U. S. A. and Canada (principal cities) Addressograph-Multigraph Corporation • Canada: Toronto and branches — Sears Limited

New FotoPlate 8 comes in convenient sizes — and prices

Press	Plate Size	End Style	Price per plate			Press	Plate Size	End Style	Price per plate		
			50-450 plates	500-950 plates	1000 and over				50-450 plates	500-950 plates	1000 and over
ATF 15	10 x 15	Pin Bar	18¢	17¢	16¢	Multilith 1250	8½ x 12	Pin Bar	12¢	11½¢	11¢
ATF 14 x 20	15½ x 20½	Punch	37½¢	35½¢	33½¢	Multilith 1250	10 x 15	Pin Bar	18¢	17¢	16¢
ATF 14 x 20	15½ x 20½		38½¢	36½¢	34½¢	Multilith 1250	10 x 15½	Slotted	18¢	17¢	16¢
ATF 17 x 22	20 x 22½		54½¢	51½¢	48½¢	Multilith 1250(W)	11 x 17½	Pin Bar	24¢	22½¢	21¢
A. B. Dick 350	10 x 15	Pin Bar	18¢	17¢	16¢	Multilith 1250(W)	11 x 18	Pin Bar	24¢	22½¢	21¢
A. B. Dick 360	10½ x 18½	Pin Bar	24¢	22½¢	21¢	Multilith 1300	11½ x 19½		27½¢	25½¢	24¢
Davidson 251	10 x 16		18¢	17¢	16¢	Multilith 1300	11½ x 20½	Slotted	27½¢	25½¢	24¢
Davidson 233	16 x 17½		34¢	32¢	30¢	Multilith 2066	15½ x 20½	Pin Bar	37½¢	35½¢	33½¢
Ditto L-10	8½ x 12	Pin Bar	12¢	11½¢	11¢	Multilith 2066	15½ x 20½	Slotted	37½¢	35½¢	33½¢
Ditto L-10	12 x 14½	Pin Bar	21¢	19½¢	18½¢	Multilith 2066 (LD)	20½ x 20½	Pin Bar	49½¢	46½¢	44¢
Harris 14 x 20	16½ x 20½		40¢	38¢	36¢	Multilith 2066(LD)	20½ x 20½	Slotted	49½¢	46½¢	44¢
Harris 17 x 22	19½ x 23		54½¢	51½¢	48½¢	Photostat 1115	10 x 15	Pin Bar	18¢	17¢	16¢
Miehle 17	14½ x 17½	Lithoprint	31¢	29¢	27½¢	Photostat 1117	10½ x 17½	Pin Bar	23¢	21½¢	20½¢

Warren's
HIGH STANDARD

FotoPlate

... a product of S. D. Warren Company, 89 Broad Street, Boston

1956-
1960

⊗ FOUR YEARS
OF CRONAR ⊗
FILMS FOR THE
GRAPHIC ARTS

⊗ A FULL LINE OF
CRONAR FILMS
ON THE SAME
POLYESTER BASE

⊗ 13 SEPARATE
CRONAR FILMS
THAT HAVE BEEN
"PROVEN IN USE"

Masks? Separations? Halftones? Continuous tone positives? You name the job, we'll supply the film. You can depend on Du Pont for leadership in graphic arts films and film research.

HIGHLIGHT MASKS: CRONAR Pan Litho, CRONAR Ortho A, CRONAR Ortho B, CRONAR Ortho M.

COLOR SEPARATIONS: CRONAR Transparency Pan, CRONAR Reflection Pan, CRONAR Low Gamma Pan.

CORRECTION MASKS: CRONAR Masking, CRONAR Pan Masking, CRONAR Commercial—S, CRONAR Ortho A, CRONAR Ortho B, CRONAR Ortho M.

CONTINUOUS TONE POSITIVES: CRONAR Commercial—S.

HALFTONES: CRONAR Ortho A, CRONAR Ortho B, CRONAR Ortho M, CRONAR Pan Litho, CRONAR Clear Back.

DUPLICATE HALFTONES: CRONAR Direct Positive Clear.

STRIPPING AND LAY-UP: CRONAR Clear Base.

E. I. du Pont de Nemours & Co. (Inc.), Photo Products Department, Wilmington 98, Delaware. In Canada: Du Pont of Canada Limited, Toronto.

BETTER THINGS FOR BETTER LIVING . . . THROUGH CHEMISTRY



Symbol and CRONAR are Du Pont trademarks for polyester graphic arts films.

This advertisement was prepared exclusively by Phototypography.





Baldwin Ink Fountain Agitator for lower units of Miehle 49 4-color press was especially designed by Baldwin engineers to solve the problem of close clearance between fountain and diamond-plate when step is down.



Veteran pressman Henry Dohm watches cone of Baldwin Agitator start its travel across ink fountain on Miehle 61. "Once the ink is in the fountain and you flip the switch, you can go right ahead with your other work. And when it comes time to change colors, you can clean a Baldwin cone in a minute. Of course, this press, like all the others in this plant, has Baldwin Press Washers so it takes only a couple of minutes to wash up the press right."



"Baldwin Agitators take care of the ink fountains so the press crew can keep its eyes on the job"

Paul Shore, Treasurer
Shorewood Press, Inc., New York City

Ask questions in any plant using Baldwin® press equipment and you'll find two sides to the story—management's and the pressmen's. But analyze them and what do you have? Just different reasons for feeling the same way: "We couldn't do without them!"

Speaking for management, Mr. Shore puts it this way: "Baldwin press equipment helps increase *productive* press time and reduce costs. And it means more control over quality. Let's take the problem of ink on our Miehle 49 4-color for example. The ink goes into each fountain and

a switch is flipped. From then on, the Baldwin Agitators take care of the ink fountains so the press crew can keep its eyes on the job. The Agitator keeps the ink mixed just right and keeps the feed uniform from start to finish."

In the photograph above, you see Shorewood's Miehle 49 and pressman Dave Scheck. Here's *his* story: "No pressman wants to keep jumping up there to keep ink stirred. And without a Baldwin Agitator, you would break your back stirring ink for the lower units. As Mr. Shore says, we just put in the ink and forget it."

Baldwin® Products protected by U.S. and foreign patents and patents pending.

WILLIAM GEGENHEIMER CO., INC.

**80 Roebling Street
Brooklyn 11, New York
Phone: EVERgreen 8-5610**

Manufacturers of Baldwin Ink Fountain Agitators • Baldwin Press Washers • Baldwin Water Stops • Baldwin Water Levels

For fidelity of dots . . . use



NATIONAL CARBON ARCS!

TRADE-MARK

Cut your burn-in time and reduce costly hand-tooling with "National" High Intensity carbon arcs. The excellent point source of light provided by these carbons assures sharper reproductions from plate to plate. Consistent uniformity adds up to savings in improved scheduling and increased capacity.

To be sure of quality reproductions . . . use nothing but the best — arc lamps teamed with "National" carbon arcs. For details, write National Carbon Company, Division of Union Carbide Corporation, 270 Park Avenue, New York 17, N. Y. In Canada: Union Carbide Canada Limited, Toronto.

"National" and "Union Carbide" are registered trade-marks for products of

NATIONAL CARBON COMPANY

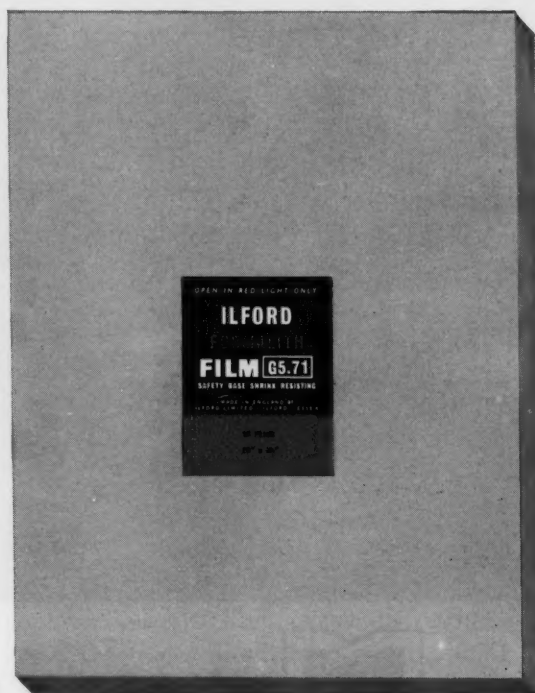
**UNION
CARBIDE**

FACTS ABOUT FORMALITH

10 good reasons for using this trouble-free film

Formalith is a high quality lith film for making line and halftone negatives and positives of exceptional clarity and faithfulness, even when the copy is poor. Among its many outstanding performance characteristics, the following are most significant:

- 1 The very high contrast emulsion consistently produces clear black lines and sharp, hard, almost fringeless dots.
- 2 During development, the image comes up slowly and builds up gradually, permitting the cameraman adequate time for control.
- 3 With line copy the background is uniformly dense, with a minimum of pinholing. Opaquing is practically eliminated.
- 4 It dot etches exceptionally well.
- 5 It is outstanding for faithful rendition of the middle tones of halftone copy.
- 6 It is normally supplied on a specially cast, shrink resistant, triacetate base (.005" and .003") but is also available on .005" and .010" polystyrene.
- 7 It lies absolutely flat in the camera. The triacetate base scores and cracks easily after processing to facilitate stripping.
- 8 It responds well to the fine line development technique.
- 9 It is *consistent* in performance, batch to batch and box to box.
- 10 It is economically priced.



If you use sizable quantities of lith film, it will pay you to investigate the savings Formalith offers . . . not just in film cost but in freedom from processing problems. Order through your regular graphic arts supplier.

ILFORD INC.


37 WEST 65th STREET, NEW YORK 23, N.Y.

IN CANADA: Canadian distributors for Ilford Limited,
London: W. E. Booth Company, Limited, 12 Mercer St., Toronto 2B

MODERN LITHOGRAPHY, July, 1960

for your customer's drawing board...

a new portfolio of printing design ideas on
EAGLE-A QUALITY TEXT
and **COVER WEIGHT**



Your customers will value this new idea portfolio of beautiful printed pieces on Eagle-A Quality Text and Cover Weight. This colorful portfolio of "Thought Starters" is the first of a new Eagle-A series designed especially for buyers of printing — and it's offered with our compliments. It's a source of ideas for layout design, for die-cuts and folds, for new color combinations and new ways to use Eagle-A Quality Text. This famous, economical paper comes in Brite White, Arctic White and six striking colors in wove and laid finishes — and in Brite White, wove and laid, and matching colors, laid, in Cover Weight. Eagle-A Quality Text and Cover Weight is ideal for brochures, catalogs and many advertising pieces, printed by offset or letterpress. Envelopes to match are available from Kent Paper Company, New York. For your own personal "Thought Starters" portfolio, write to Dept. M,

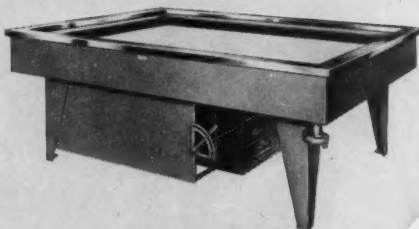
EAGLE-A  **PAPERS**

AMERICAN WRITING PAPER CORPORATION, HOLYOKE, MASS., MAKERS OF EAGLE-A COUPON BOND AND OTHER FINE EAGLE-A PAPERS



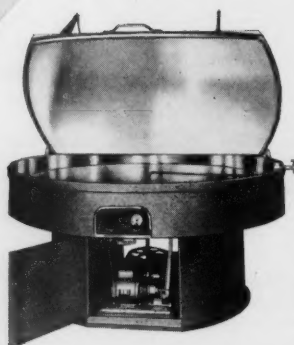
"Champion" EQUIPMENT FOR THE PHOTOENGRAVER AND LITHOGRAPHER

"Champion" DOWN DRAFT LITHOGRAPHERS WORK-TABLE with variable exhaust controller



Removes hazardous fumes—at their source. No odor in shop or offices. Tables at convenient working height. Quiet operating exhaust blower. The Koroseal lined trough resists corrosion from chemicals used.

"Champion" PLATE WHIRLER for Lithographers



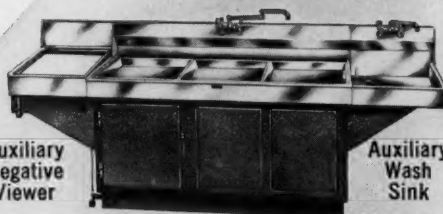
by ball bearings. All instruments for manual or automatic operation are in recessed panel. Plate whirling speed is controlled by a convenient lever at from 35 to 105 R.P.M.

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Auxiliary
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Temperature maintained to a fraction of a degree. The auxiliary negative viewer and auxiliary wash sink are optional units ... can be designed for either side of basic sink. The three tray, basic sink can be ordered with, or without, either feature.

Cover is of aluminum with flat underside—thus eliminating an area for dirt to gather. It is easily cleaned. Stainless steel disposal trough. The plate platform is heavy circular aluminum plate, supported

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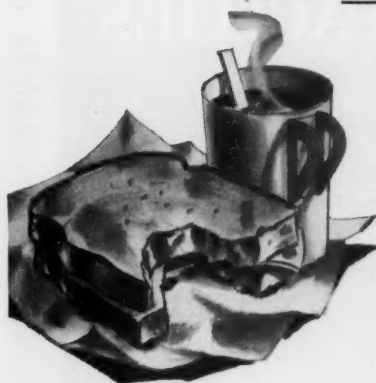
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(hi''po-al-im-en-ta' shun). Insufficient nourishment, caused by bolted sandwich, cold coffee (who has time to eat?).



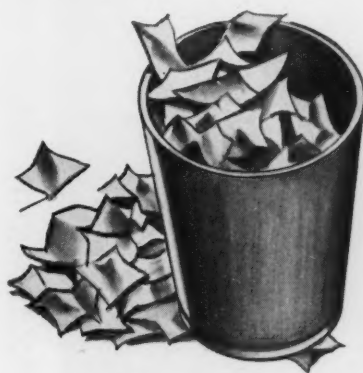
HYPERTARACHIA

(hi''per-tar-ak' e-ah). An extreme irritability of one's nervous system. Result of a long exposure to irate customer.



OTODYNIA

(o-to-din' e-ah). Pain in the ear, brought on by an epidemic of customers' blasts.



DYSTELOGY

(dis-te-le-ol' o-je). One's feeling of purposelessness, often caused by extreme waste, aggravated by repeated make-overs.



ALOPECIA PREMATURA

(al-o-pe' she-ah pre'ma-tu-rah). The premature loss of hair (often accompanied by an acute loss of customers).



ERGASTHENIA

(er-gas-the'ne-ah). A condition of fatigue from overwork; symptoms are bleary eyes and listlessness.

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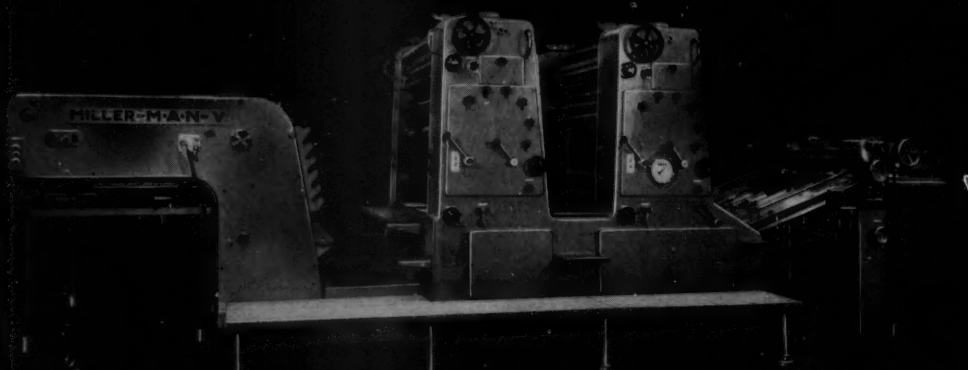
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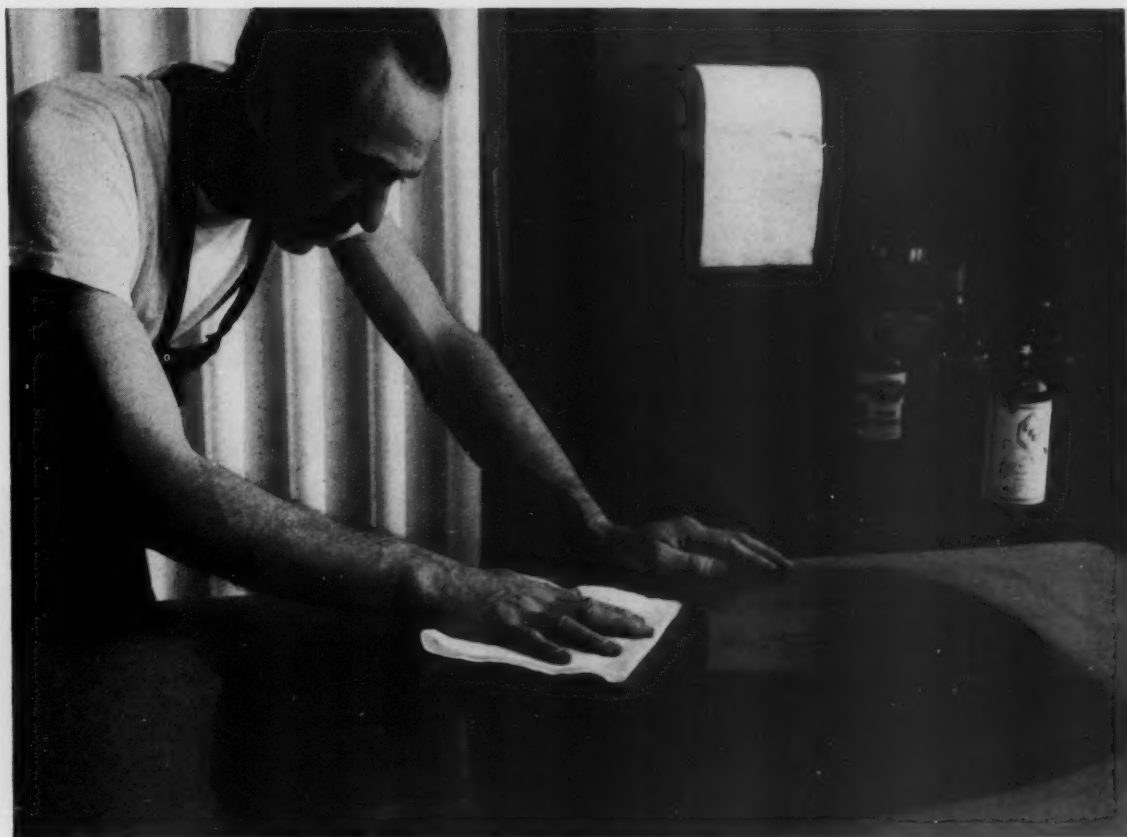
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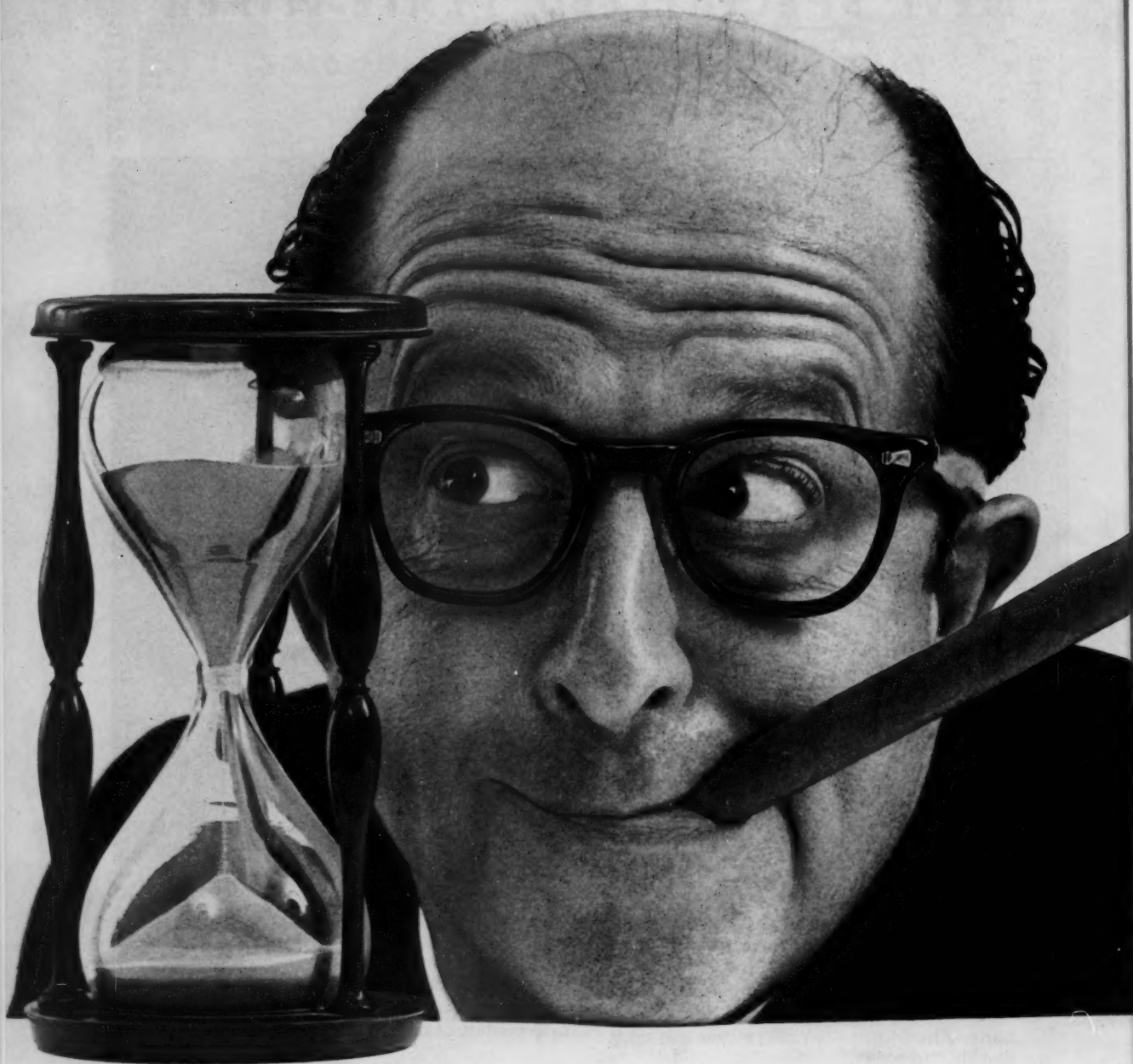
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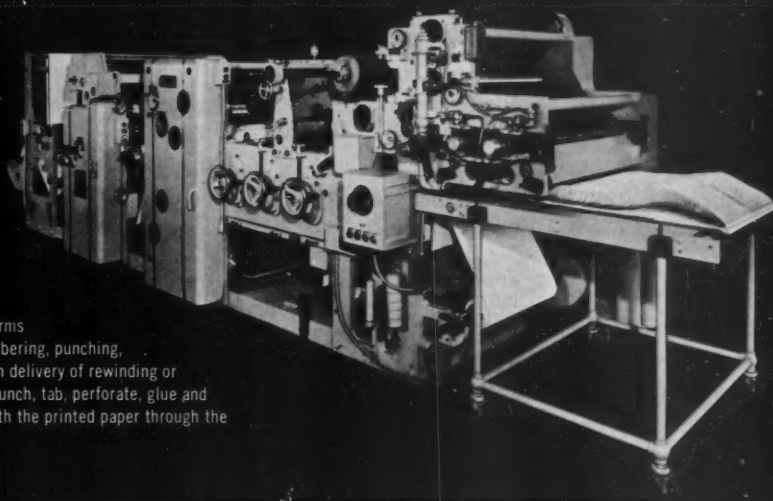
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MODERN LITHOGRAPHY, July, 1960

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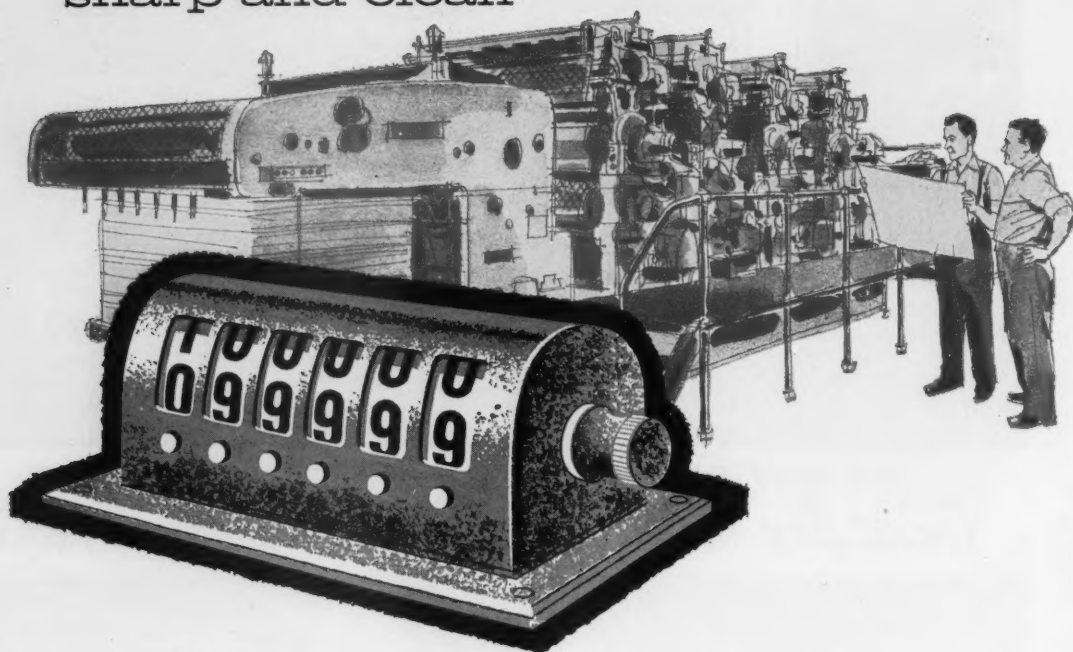


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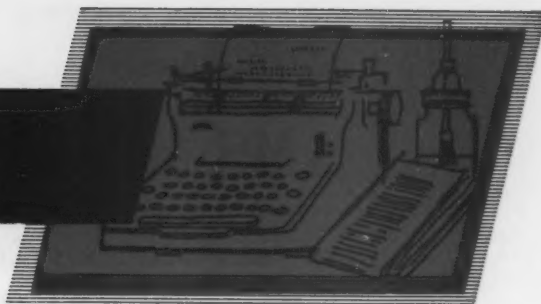
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EDITORIALS



Hold On To That Money!

BEFORE the Boston convention, it was pretty generally agreed by NALC members that the group needs an executive secretary and a permanent headquarters, but there was no agreement on how to raise sufficient funds to support such a program.

It was expected that the National Association of Litho Clubs might go on record in favor of the program, pending receipt of sufficient funds to finance it.

But, lo and behold, the group voted a 100 percent dues increase (from \$1.50 to \$3 a year) which will put about \$6,500 more into the kitty, but referred the secretary-headquarters proposal to committee!

There was much debate about where NALC is spending its money, what it should be doing to help local clubs, and whether the constitution and bylaws should be reviewed and revised.

There is reason to believe that the expanded (and renamed) Standing Planning Committee will deal effectively with these problems. It is expected that this committee will give serious consideration to the well-thought-out proposals of past president Bill Stevens for a complete reconsideration of NALC programs and practices (See June ML, page 105).

However, what's to become of all that extra income, while the committee works on its assignment in the months to come? Will it be dissipated in current programs of NALC? In order to insure a buildup of funds for at least a modest secretary-headquarters program—which we still feel is an essential for NALC—and in order to satisfy those clubs that opposed the increase, ML thinks the new NALC administration should:

1. *Live entirely on its current budget.*
2. *Earmark all income from the dues increase for a special account, to be used only after an*

acceptable plan for a secretary-headquarters has been approved.

Otherwise, a year from now, NALC may find itself not only without a secretary, but without the additional funds as well!

And, while the NALC officers and committees are considering economy, they might give some thought to cutting the postage bill, which runs to more than \$2,000 each year. ML wonders just how much is accomplished by mailing technical literature to litho club members when the very same material is reported faster, and often more thoroughly, in the trade press and at *no cost* to NALC.

It is to be hoped that the NALC planning committee will point the way for a return to the original purpose of the organization: to provide a means of exchanging information among litho clubs on such topics as speakers, membership, social programs, educational activities, etc.

This liaison can be carried on by means of conference type meetings with, perhaps, one delegate from each club, by more efficient use of the Tip Sheet, by fuller use of the pages of ML and other trade magazines, and, eventually, with the overall guidance of a paid executive secretary or secretarial service, operating in a permanent headquarters.

Careful consideration of NALC activities and finances can make such a modest program a reality within the next year.★

Quote of the Month

'While this is a remote hope, it is believed in some circles that with man's present knowledge of chemistry and related sciences we ought soon to be able to develop a plate whose nature is essentially lithographic, but whose performance would not depend on the mutually repellent nature of water and ink.'—Charles Shapiro, LTF (See page 32).

bidding for

AMS Map Contract Work

an interesting market for lithographers

Third in a Series of Four Articles on AMS

By Mike Geary
Washington Correspondent

HOW the Army Map Service contracts for the lithography of multi-color maps was reported in *Modern Lithography* five years ago (October, 1955). In view of the current activity in this field and the many changes that have taken place since the earlier report, ML now feels it in order to again bring to the attention of lithographers, interested in printing maps under government contract, some pertinent information on the subject.

Since our last report many millions of maps have been reproduced by commercial lithographers throughout the country in what appears to be a continuing program. It is anticipated that in the near future AMS will be issuing invitations to bid on the lithography of additional quantities of maps. For those lithographers who have not participated in the AMS program in recent years and for those who have not previously participated in this program at all, but are now interested in doing so, this article is primarily aimed. Some information may also interest the lithographer now engaged in AMS contract work.

In the past, a majority of the AMS contracts consisted of short-notice requirements. The administration of these contracts at AMS was handled by administrative and technical personnel from various branches of the Repro-

duction Division. Today, the Contracts Analysis Branch, Quality Analysis Division of the Department of Graphic Arts and Distribution is a separate unit, organized specifically to administer this continuing program for the contracting of AMS map reproduction to private industry.

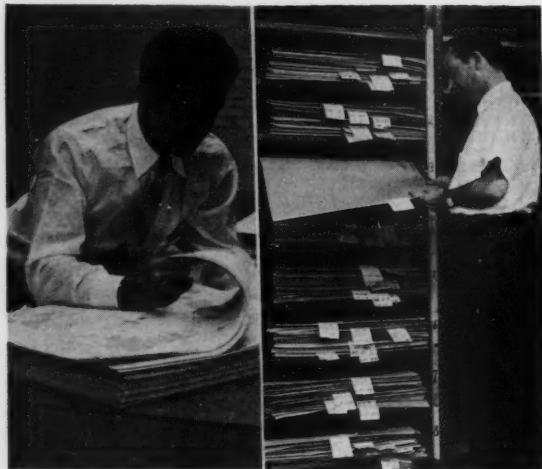
Activities of Contract Analysis Branch

This branch prepares specifications and assembles the material to be used for contract; receives visiting contractors; and provides them with information relative to the project to be contracted; conducts inspection trips to contractors places of business to review the work produced and to accept or reject the same for shipment to AMS; gives plant technical guidance when requested or when and if it is deemed necessary in the best interest of the government. All personnel in this branch are qualified journeymen in one or more of the phases of work required of the contractor. Their assistance to the participating contractors has proved to be of great benefit to both the contractor and the government.

The type of work required of the contractor is varied. In most instances the material placed on contract will consist of film negatives requiring a minimum of simple strip-ins prior to platemaking. However, due to the volume and variety of maps placed on contract, a set pattern of requirements would be almost impossible to establish. Consequently, a contractor may expect to find from time to time an invitation to bid on any one, or combination of the following type projects:

1. Negatives furnished, ready for plates and press run after contractor's code has been added.
2. Negatives furnished with minor revision, deletions or additions to be made prior to making plates and press run.
3. Negatives furnished with a considerable amount of engraving, opaquing, changes, corrections, etc., prior to platemaking and press run.
5. Original photo negatives or scribed material with requirements for the contractor to furnish film negatives and/or positives only, with no requirement for plates or press work. On most contracts where film is required, it is furnished by AMS. On all contracts, paper is furnished by AMS; F.O.B. destination indicated in invitation. (EDITOR'S NOTE: On contracts requiring a consider-

Inspector Robert Ward (left) looks over previous editions marked for correction by contractor. At right, Patrick Lazzarino, inspector, checks negative sets ready for introduction to contractor.



able amount of paper, transportation costs could become an important item in bidding.)

Maps being reproduced will average five colors but may require as many as 12 negatives to produce the plates required. Total quantity requirements vary on these contracts. With each invitation to bid, specific instructions are given for each "lot" of maps. One invitation may include several lots with one or more of the several types of material mentioned. However, a specific lot usually covers a specific type of material. Due dates are given for each lot, though more than one lot may fall due on the same date.

Prior to submitting his bid, the contractor may be required to inspect the material to be used on the proposed contract, at the AMS Contracts Analysis Branch, Quality Analysis Division. Here, he is briefed on contract procedure concerning his invitation to bid and his questions are answered by personnel of Contracts Analysis Branch. Any new techniques required in connection with the contract are explained and subsequent "in plant" assistance is given by an inspector, should the contractor receive an award and require this assistance.

Awards Based on Bid and Capacity

Awards are made on the basis of low bid and plant capacity. In the event a new bidder is chosen to receive an award, the contracting officer reserves the right to make a pre-award inspection of the bidder's plant. The contracting officer may also reject late bids and bids where the bidder failed to inspect the contract material.

In view of the vast quantities of AMS maps lithographed in commercial plants during the past few years, it is obvious that many lithographers have been enjoying a profitable association. However, there are those who have tried and showed little success or profit. Some have failed to comply with government specifications after receiving an award and on rare occasions some were required to forfeit their contracts. The latter situations can be avoided, AMS feels, and the contractor should be able to realize a reasonable profit while bidding fair-

Contractors for AMS Work

January, 1957 — May, 1960

P = PRINTING, NC = NEGATIVE CORRECTION,
Pr = PROVING, Ph = PHOTOGRAPHY

Alexandria Drafting Company (Nc, Pr, Ph), Allen Lane & Scott (P), Arrow Blue Print Co. (Ph), Bankers & Merchants Litho Co. (P), Baronet Litho Co. (P), B. & R. Co. (NC, Pr), Century Art Press, Inc. (P), City Printing Co. (P), Consultants & Designers (NC, Pr), Continental Lithographers (P, NC), Cooper-Trent (Ph), Courier Journal Litho Co. (P, NC), Craftsman Press, Inc. (P, NC), Cullom & Gertner Co. (P, NC), Rufus H. Darby Printing Co. (P), Democrat Ptg. Co. (P), Delzer Marlow Litho Co. (P, NC), Fontana Litho Co. (P), Foote & Davies Litho Co. (P), Gamse Litho Co. (P), Gateway Press Inc. (P, NC), The A. L. Garber Co. (P), The Gugler Litho Co. (P), A. Hoen & Co. (P), Jefferson Printing Co. (P), Keller-Crescent Co. (P), Kirby Litho Co. (P, NC), Majestic Press Inc. (P), Maran Printing Co. (P), Montauk Litho Inc. (P), Murray Research Co. (NC, Pr), The National Survey (NC, Pr), Nagar Drafting Co. (NC, Pr, Ph), Pitt Photo Litho Co. Inc. (P), Pridemark Press (P), Products & Industrial Engr. Corp. (NC, Pr), H. G. Roebuck & Son (P, NC), Sauls Litho Co. Inc. (P), John S. Stark Printing Co. (P), T & T Associates (NC, Pr), Universal Printing Co. (P), Westerman Printing Co. (P), Williams & Heintz Co. Inc. (P, NC), Winthrop Ptg. & Offset Co. (P, NC), Zabel Bros. Co. (P)

trade prices and taking into consideration at the same time that he is engaged in competitive bidding.

Transportation costs and labor will vary in different locations, affecting bids. But, where low bids in one area may apply in one group of awards, the unsuccessful bidder should bear in mind that in subsequent bids, the contractors in that area may not have the capacity available to bid as low as previously or even to bid at all, due to production on previous awards. A contractor can underbid himself out of business as easily as he can overbid himself out of a contract. Usually it is found that

(Continued on Page 126)

Left: Inspectors Raymond Thomas (left) and Roy Michaels check vinyl base negative for contract job. At right, Thomas Green (right fore-



ground) discusses specifications with inspector Gene Murphy, at the Army Map Service plant in Washington, D. C.





Newly expanded plant of Gateway Press, Inc., Louisville, this month celebrating its 10th anniversary after quietly growing for years.

Gateway Press in Louisville:

'Just Ordinary Lithographers Quietly Growing for Years'

PLANT visit articles in MODERN LITHOGRAPHY usually tell the story of lithographers who have made one dramatic move after another . . . doubling the personnel . . . expanding the plant . . . and adding new equipment in rapid sequence. From time to time readers suggest that we take a look at offset shops whose growth and progress has been less startling but who nonetheless have done a good job of keeping up with progress in our fast moving industry.

This month the plant under consideration — Gateway Press, Inc. Louisville, Ky. — fits exactly into that category. The company is just 10 years old this month, and, in the words of production manager George H. Seitz, "we are just ordinary lithographers possessing no special skill or intellect. We do regular commercial lithography and we have no patented material which gives us a privileged position . . . We have been quietly growing for years; now we're ready to step out . . ."

The "quiet growth" that Mr. Seitz talks about was a little louder than usual earlier in the year, when Gateway "stepped out" with an addition

that vastly increased the size of its Louisville plant. In addition to the increased working and storage area, the company installed a Rutherford Photo-Composer, a Craftsman Lineup Table, two additional stripping tables, a six-station Macey saddle gatherer and stitcher and a Brackett trimmer.

Although no new presses were added in the recent expansion, C. W. Georgehead, president of the company, declares that "Gateway has one of the largest lithographic pressroom capacities in Kentucky." The plant is completely air-conditioned and humidity controlled in vital areas.

The company further claims that it was the first in the state to be an exclusive lithographing plant, and the first to print a weekly newspaper—the *Jefferson Reporter*—by cold type and offset.

Things did not always look so encouraging for Gateway, however. Following World War II, after serving in the South Pacific, Mr. Georgehead returned to the United States and considered, variously returning to law school; moving to the Southwest, or California where he anticipated the greatest economic and population

growth; or getting a job in industry. He and his wife decided to remain in Louisville.

He obtained a job as a salesman with a printing firm, although he was completely ignorant of the industry. In the long history of the firm which employed him—it is believed that he was the first printing salesman they had ever hired who was completely untrained in the printing industry. The company had no training program, and other than spending one week with an established salesman, Mr. Georgehead received no printing sales training. Further he had insisted on being hired on commission and as a result was given no established commercial accounts. Despite these obstacles within one year he was earning an excellent salary.

Later on, however, he had a desire to organize his own firm. This decision was difficult to fulfill. He was short on cash and the local Chamber of Commerce discouraged him from going into the printing business. Banks took his application and then refused to make a loan. Furthermore, he encountered difficulty in obtaining the men he wanted to go into business

with him. William Kinzler, a now retired Harris-Seybold salesman in the area, proved to be the only source of encouragement during that difficult period.

Finally, Mr. Georgehead withdrew his savings, mortgaged his home, and formed Gateway Press, Inc. There were a total of five stockholders with Mr. Georgehead holding 55 per cent of the stock. In July, 1950, Gateway Press opened its doors in rented quarters consisting of 4,500 sq. ft. Equipment included a new 22½ x 35" Harris and a new 40" Seybold cutter plus a few miscellaneous pieces of second hand equipment. Four months later the company bought a second hand 25 x 38" suction folder, and three months later a second Harris press of the same size. Shortly thereafter a new Baum folder and a Rosback Gang Stitcher were added. Gradually more and more small pieces of additional equipment were being purchased.

Gateway managed its modest growth at that time by plowing back all the profits and keeping the officers salaries low. In fact Mr. Georgehead reports that his salary was less than half of what he was earning as a salesman and his hours longer.

In 1953, it was decided that the firm would continue not to pay dividends; but, to retain earnings in the business in order to build a new plant. At this time, two minority stockholders who were also officers and employees of Gateway dissented with



C. W. Georgehead

these plans; therefore, Gateway Press repurchased these stocks at 3½ times their original investment. The loss of these key men plus the loss of the badly needed capital once again placed Gateway in a difficult financial position.

Although primarily a salesman Mr. Georgehead took on the duties of estimator, production planner, purchasing, office detail, and quality control in the firm, which now included 22 employees.

Instead of delaying the planned expansion, Mr. Georgehead obtained an \$80,000 loan to build Kentucky's first air-conditioned and humidity controlled litho plant on a four acre plot he had purchased, one-half mile outside the city limits in a new industrial area.

A new Harris 36 x 48" two-color press was purchased on time and a camera, platemaking, and stripping department was started. In April, 1955, Gateway Press moved to its new 12,500 sq. ft. plant. The enlarged operation presented many problems, chief of which was obtaining trained personnel.

New personnel added to the company included Frank Etienne as press-room foreman; Samuel Stephens, as salesman, and Mr. Seitz.

Two years ago the company installed two Harris 36 x 49" and a Harris 17 x 22" single-color press.

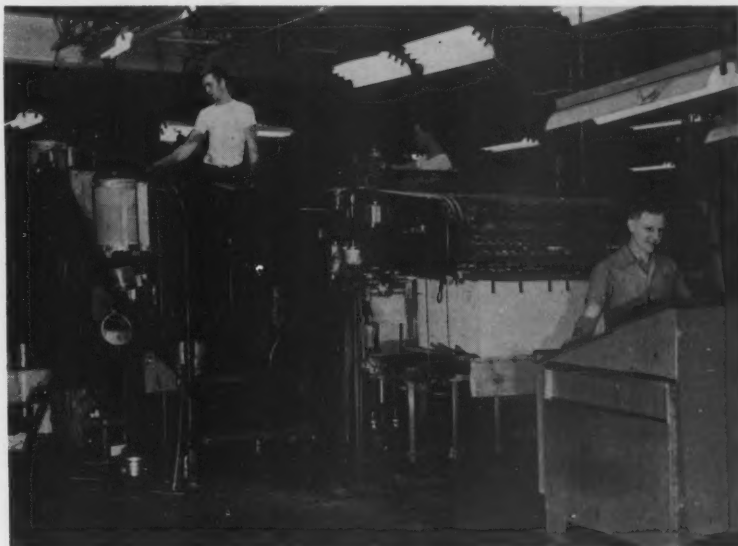
A loan of \$150,000 was obtained last August, and the 8,200 sq. ft. of addition was made in January.

The company now employs 47 persons, with increased personnel planned in the near future. Despite all its problems, Gateway's profits have been above the industry average and sales have increased each year on an average of 22 per cent.

The range of jobs runs the gamut from printing the *Jefferson Reporter* to multi-color maps for the Army Map Service. Gateway Press in all its work, is striving to achieve its motto "Lithographers with Imagination."

As for the future, Mr. Georgehead told ML that by 1968, he hopes to fill the company's four-acre tract with 102,000 sq. ft. of plant and 65,000 sq ft. of parking and be doing upward of \$5,000,000 of business a year. ★

Partial view of pressroom at Gateway, showing two-color Harris 36 x 48" press. President Georgehead describes the pressroom as "one of the largest lithographic capacities in Kentucky."





Water, Water, Everywhere...

Through the years three basic approaches to lithographic dampening have been explored

By Charles Shapiro

Educational Director
Lithographic Technical Foundation

IN 1955 William H. Wood, of the Harris-Seybold Company, presented a paper at the annual meeting of the Technical Association of the Graphic Arts. It was entitled "A Review of Dampening Systems for Lithographic Presses." Mr. Wood included two lists which should be of interest to lithographers. Mr. Wood, in his first list, stated that the system (dampening) or device:

1. Must supply the optimum quantity of dampening fluid to the non-printing parts of the plate by:
 - A. Applying the dampening fluid across the width of the plate, uniformly or variably without forming droplets or streak patterns.
 - B. Being adjustable to feed lesser or greater quantities to the entire plate surface.
 - C. Being adjustable to provide differences in the quantity of dampening fluid in vertical bands around the periphery of the plate cylinder covered by the plate.
 - D. Avoiding to the greatest possible extent the application of dampening fluid to the printing areas.
 - E. Providing moisture regulated to some extent by demand of local areas and being able to remove excess dampening fluid particularly as it may reside on the printing areas.

- F. Being versatile enough to dampen plates for satisfactory printing with any present day litho ink regardless of vehicle or pigment used.
2. Must maintain correct setting for optimum results.
3. Must not affect the plate mechanically (elongating dots, burnishing plate, etc.).
4. Must be easy to service (clean and maintain).
5. Must not be prohibitive in price or cost of operation and maintenance.
6. Must be adaptable to present press design, from space and operational standpoint.
7. Must not be difficult to set in operation, and adjust during run.
8. Must not present mechanical, health or electrical hazards to press operator.
9. Must not cause moisture to form or collect on areas other than the printing plate, especially in the cylinder gap.
10. Must be operable at any speed at which press is run.

In a second list he described what the desirable characteristics of such a dampening system or device are, and they follow:

1. Should have infinite adjustment of dampening fluid supply, from zero to excess amount, and settings should be simple, visual and easy to repeat.

2. For an aqueous dampening fluid, the device may, preferably, not require roller contact.
3. Should be self-contained on the press.
4. Should be an improvement over present molleton systems in the list of requirements above.
5. Preferably should not be a complex mechanical or electrical system.
6. Should operate for extended periods without necessity of cleaning or changing components of the system.
7. Should be quiet in operation.
8. Should not employ materials critical or hard to get either in war-time or peace.
9. Should dampen the non-image areas only.
10. Should have complete automatic operation regulated by need, consistent with No. 5 immediately preceding; this implies rapid response to changed settings or changing demand for dampening fluid.

Attempts to meet these specifications, as laid down by Mr. Wood, have been quite numerous, even though the lithographic process itself is just about 150 or 160 years old. All of these attempts can be classified into one of three groups:

1. *Methods wherein the dampening solution is applied to the plate by direct contact of the device to the plate. The conventional present-day dampening system fits into this category.*

From a talk presented at Navigraphic '60, New York.

2. *A device where dampening is accomplished without actual contact of the device with the plate. Such a device can be described, although admittedly in over-simplified form, by thinking of a water faucet held over the plate and turned on.*

3. *A system wherein the water is applied to the plate through the inking system. The Dahlgren system, of which everyone has heard so much recently, is an example of this type of device.*

No Problem on Stones

Some of the attempts to discover a more efficient way to accomplish dampening go back at least 100 years, which just about coincides with the beginnings of the great advancements in press design, especially with the application of power to printing machinery. But, until the advent of the lithographic plate, dampening itself was not a critical problem except in terms of mechanizing the device so that it could become part of a power-driven press.

This statement may give rise to some questions as to "How come?" The fact is that the lithographic stone was a rather miraculous piece of material. It was pretty nearly impossible to have too much water on the stone, or too little. The stone itself actually accepted water pretty much as a sponge and the most exaggerated gross carelessness was required to reach a point where there was too much water on the surface or too little. But when the lithographic plate came along, and this was before photomechanical platemaking methods, the industry was working with a material which required extremely accurate control of the amount of moisture applied to the plate.

The present conventional system, we believe, goes back to a patent issued in 1884 and was developed for stone lithography. This system has varied very little ever since.

As I've already said, much work has been done to accomplish the dampening operation more efficiently. But the accomplishments that have come into wide use are centered almost entirely around improvements

in the conventional system. The list of these improvements can be divided into several categories. The first group consists of improvements in the dampener form roller coverings which contact the plate. These attempts at improvement include: molleton in sleeve form to replace the molleton strips which were sewn on the rollers; a variety of materials to go under the outer molleton cover; various kinds of thin cloth sleeves and with them a variety of materials to go under the sleeve; paper dampeners in strip and recently in sleeve form. Another group of improvements concerns the control of water flow and includes water-level devices; motor-driven dampening fountain rollers; water stops of various designs. A last and small group includes construction features such as different metals for various parts of the system; changes in the form of the ductor roller; etc.

In all this we've described efforts to solve a problem, but we've done nothing to clearly describe and identify the problem. Let us first recall what I said earlier: dampening was not a critical problem when we were working with lithographic stones; it became a problem when the industry went over to thin metal plates. Strangely enough, in recent years the problem has actually become more acute as we've improved the process. A very considerable portion of this improvement has taken place in the platemaking area. We've vastly improved the desensitizing steps; we've strengthened the image; we're running finer and finer grains, and even no grain.

By strengthening the image we've created a situation where we want a non-image area which will run clean at least as long as the image will hold up. But in learning to run plates with little or no grain and with improved desensitized areas, we've made it absolutely essential that the amount of water applied be kept to an absolute minimum—so small that the very slightest variation in quantity and evenness in application of dampening solutions shows up immediately in a poorly printed job. Not only

must the absolute amount of water be controlled within extremely narrow limits, but the amount of water in relation to the amount of ink must also be controlled.

Ink-Water Balance

Part of the skill of an experienced pressman is his ability to balance the ink and water. A certain minimum amount of water is needed to keep the non-printing areas clean. This amount varies principally with the type of plate, and the kind of ink and paper being run. But the range within which this amount may vary, and still produce acceptable work, has grown narrower and narrower as the lithographic process has been improved. And even though we accept the principle of a balance within a range of some extent—even though a slight range—the pressman is forced to make every effort to establish this balance with the lowest possible amount of water that can be controlled on the press, and repeat this for each new job.

Let us now take a closer look at the dampening picture as it now exists. By far the most widely used system or device is the so-called conventional system where water is applied to the plate by means of a roller whose surface deposits the water on the plate by contact. The molleton-covered roller is the most common. It is difficult to keep clean; it is not uniformly thick and therefore fine adjustments of pressure against the plate are difficult to make. Also it requires re-adjustments as the cover wears in when new and wears out with use. Many of the newer thin cloth sleeves, sometimes applied over the molleton itself and sometimes over roller stocks with a specially prepared base are an improvement. Where used properly, and especially over specially cast rollers, they have done a good job, but they have never really caught on.

But, with the conventional dampening system the most spectacular improvement is experienced when switching over to paper covers. These are available in both sleeve and strip form. In either case a specially pre-

Over the years, three basic dampening methods have evolved for lithographic presses. These may be characterized as follows:

1. *Dampening solution applied to plate by direct contact.* (Conventional molleton, paper and sleeve dampeners).
2. *Dampening accomplished without actual contact.* (Mullen).
3. *Water applied to the plate through the inking system.* (Dahlgren).

pared roller stock is required. The sleeve type paper cover has received some acceptance on the smaller presses. While it can be used on large presses I've seen no such installation yet. The strip type has received some acceptance but not nearly as extensive as it should be. As of this moment, the conventional dampening system, with paper-covered dampeners, is by far the best things in dampening now available. However, there are some problems.

In the first place, the dampener form rollers must be recovered with a special rubber base. This does cost some money but, in my opinion, is the least problem in view of the results attainable. The resultant roller, however, is fairly firm. It has nothing like the softness of the molleton. While exact settings are possible because of the roller's firmness and uniformity of thickness, these attributes make it absolutely necessary that the adjustments be made very accurately. However, if the dampening unit on the press isn't in excellent working order, it may not function acceptably with paper-covered dampeners even though it does function with molleton-covered dampeners. It is obvious, from the nature of the material, that a thin paper does not hold the amount of water which a thick cloth can retain. This makes it necessary for the pressman to control very accurately the overall flow from water pan to dampener form rollers because there is little room for error either on the side of too little or too much water being fed.

As to the advantages of the paper dampener, we have first, very low cost in use; second, quick change without requiring re-setting of rollers; third, the material is so highly grease-repelling that it hardly does get dirty; fourth, an accurately adjusted dampening system works better no matter what kind of roller covering is used, and with paper covers the system must be set perfectly. As was stated previously, this is by far the best generally available, proved dampening system.

The system which has received the most attention in the last two years is known as the Dahlgren dampening system. It is a radical departure from the conventional system and fits into the third group of systems described earlier in this discussion. Dahlgren accomplishes dampening by applying fountain solution to the ink system. This idea is not new. However, the former systems in this group fed the water in such a way that it went through the entire ink train. While it worked, too many bugs developed which were never worked out. But the idea has fascinated many researchers in a desperate effort to rid the process of what appeared to be an archaic system which hadn't changed in almost a century.

Dahlgren was among those fascinated and finally came up with a new approach to making the system work. Instead of introducing the water into the ink system he takes advantage of the direction in which the No. 1 form roller is rotating. By having his dampening roller contact this No. 1

form roller, he is able to get the dampener solution to the plate before it can pass through the nip of any pair of rollers.

Exactly why the system works, we don't know. But, this shouldn't surprise anyone; we don't know why the process itself works. We're trying to find out why ink and water don't mix; we're still looking hard to figure out how ink transfer happens, and why. Given this very basic knowledge, we may be able to solve, in a real way, this whole problem of inking and dampening.

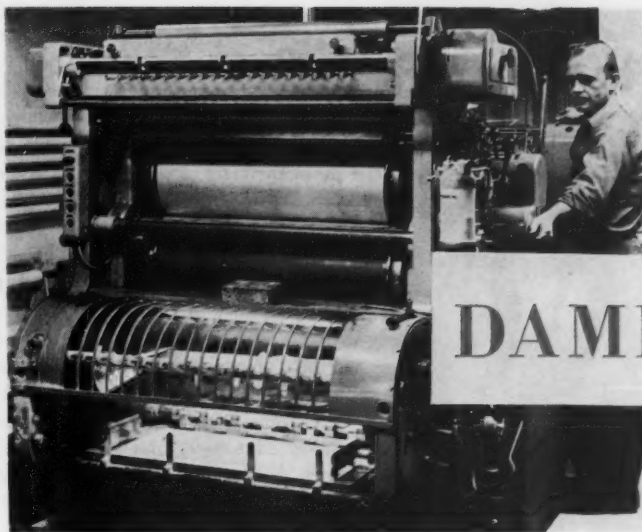
LTF has operated the early style of Dahlgren's on a two-color press for some time. It does its job beautifully. The newer Dahlgren model is now being installed on our 29" Miehle. From everything we've experienced and heard, the system is essentially good. However, we're still waiting to see how successfully the engineering problems created by large size presses are met by Dahlgren before any more can be said.

We have discussed the first group of dampening systems, which includes the conventional dampening system. We have discussed the third type as represented by Dahlgren. The second group that I listed early in my talk, those which apply moisture directly to the plate but not through contact, is best illustrated today by the Mullen system. It has proved to be successful, but very few applications of the system are in use. This system floods the plate with water from a metering roll which does not touch the plate. After the plate has been wetted down, a device known as an air doctor blade cuts the film of water down to the desired thickness and, by vacuum, draws away the excess moisture. The plate then passes under the inking system and impression is accomplished in the conventional way.

Advantages of Mullen

The principal advantage of the system is that it apparently does break the droplets of water which normally cling to the inked areas of the plate into extremely fine particles. The disadvantages, however, are rather important. In the first place

(Continued on Page 129)



For another view of the dampening technique, see article by Charles Shapiro, starting on page 32

DAMPENING...

*lithographers still
have their problems*

ONE of the problems of running an offset press is the control of the dampening system. If water were not one of the necessary evils of lithography, offset presses would be a lot easier to run. Since these systems were invented, hundreds of men have attempted to improve them. And still the system is basically the same as it was on the first lithographic press. The fact that thousands of pressmen have learned to master this system proves that it is just a matter of skill. So don't blame all your troubles on the dampening system. *It works for others and it will work for you if you operate it correctly.*

Since its inception, the dampening system has employed softly woven cotton covers on the form dampeners and on the ductor. A soft undercover was used for greater resiliency. The cotton covers usually were a molleton or toweling type of cloth and were quite thick when new. We know now that the thinking along the line of thick soft covers was wrong. The loose fibers were often pulled out by the ink on the plate. The material was

not sufficiently matted to retain moisture at the surface of each fiber. They became dirty very quickly. They had to be pressed too tightly to the plate for good operation.

Hard paper covers do a better job because there are no loose fibers to dry out and get dirty. A soft sponge rubber base affords all the resiliency needed. Such rollers are so true that they make perfect contact with the very lightest setting. And they are easily recovered.

Anyone having trouble with paper-covered dampeners should try setting them lighter. When running in contact with the plate there should be no indication of a bump after the gap. A dampening system should of course be kept mechanically perfect at all times, particularly the driving gears and the roller spindles and bearings. Roller bodies must be true to diameter throughout and perfectly concentric. Every friction surface must be kept lubricated.

On older presses, the dampening vibrator, the pan and the pan roller were of brass. This of course was to prevent rust. Actually brass is more grease receptive than it is water receptive. These items should be of

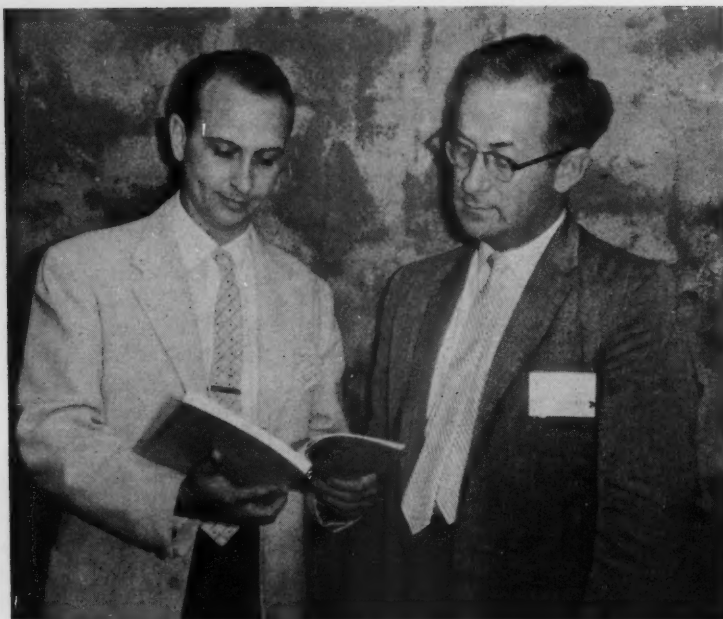
stainless steel, aluminum, or should be chrome plated. It will then be easier to keep them free of grease. Absolute cleanliness is essential to good dampening.

The pan roller and the vibrator may look clean and still not take water. These rollers will seldom carry an unbroken film of water after standing dry overnight. They should be gone over with a wad of cotton soaked in full strength fountain acid mixed with gum, or a plate etch. Clean them thoroughly until they will carry a film of water that does not break away.

The solution in the pan should be kept clean and at a constant level. Using a small amount of antibiotic in the water will prevent the growth of bacteria in the pan and hose convolve will maintain a constant level and nections. Using a water leveling device relieve the pressman of constantly checking the fountain. The correct use of good water stops can do much to maintain better water control.

Above all, do not use too much water on the plate or too much acid and gum in the solution. And always set dampeners as lightly to the plate as possible.★

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New TAGA president, William Walker (left) goes over convention program with outgoing president Philip Tobias.

TAGA Hears Papers On Electronics; Holds Litho Club Discussion

THE emphasis was on electronics, as applied to the graphic arts, at the 12th annual meeting of TAGA last month in Washington, D. C. The Technical Association of the Graphic Arts met June 20-22 at the Sheraton Park Hotel.

Side attractions, including a well-kept set of tennis courts, the dedication of a new swimming pool at the hotel, replete with a bevy of bathing beauties, and other nearby attractions, including an extensive zoo, failed to deter the several hundred technical men from listening to 19 papers. After meeting hours, however, these facilities were well utilized.

Two sets of plant trips occupied the final day of the meeting. Included

were trips to the Bureau of Printing and Engraving and the Government Printing Office, and a second trip to the Army Map Service and Haynes Lithograph Co.

Elected to head TAGA for the coming year was William Walker, of West Virginia Pulp and Paper Co., who succeeds Philip Tobias. Other officers include Warren Rhodes, Rochester Institute of Technology, 1st vice president; William Reid, Battelle Memorial Institute, 2nd vice president; Cyril Horton, Eastman Kodak, treasurer; and Earl Sundeen, Eastman Kodak, secretary. Albert Materazzi, Litho Chemical & Supply, was named to the board of directors.

Next year TAGA will meet at the

Deshler - Hilton Hotel, Columbus, Ohio, June 12-14.

An innovation at this year's meeting was a special panel discussion sponsored by the Washington Litho Club, at which six technical men attempted, with considerable success in some cases, to translate the technical papers into terms understandable to the man in the shop. Serving on the panel were Mr. Reid, Albert C. Zettlemoyer, director of the National Printing Ink Research Institute; Joseph A. McSweeney, vice president of Progressive Color Corp.; Mr. Materazzi; Michael H. Bruno, research director of LTF; and Marvin Rogers, consultant. Outgoing president Tobias was moderator. Each man described three or four of the papers, then answered questions from the audience of litho club and TAGA members.

Talks which attracted considerable attention covered an intriguing procedure for electrostatic printing, an electronic method of development control, which depends upon density measurement of film during development, a rectifier which makes adjustments for the angle at which an aerial photograph is taken, producing a rectified print from photos taken with angles as high as 80 degrees, a discussion of "bending" light rays by means of tiny fibers bundled together and arranged in a desired shape, and a discussion of the speeding up effect of the first down wet ink film on the drying of subsequent films and the later retardant effect of the same film.

Also of particular interest were a detailed report of quality control measures helpful to the purchaser as well as the lithographer, an explanation of color diagrams (an inverted triangle and a hexagon) which are useful to predict subtractive color mixtures and to chart both hue and printed color strength, a suggestion that far too much light is being used for illumination than is really needed by the human eye, and a round-up talk on some of the problems inherent in lithography and what is being done to correct them.

Following are brief abstracts and comments on these and several other

papers which are of particular interest to lithographers:

The Videograph—A New Approach to Electrostatic Printing, by James Stone, Jr., A. B. Dick Co. Television and xerographic principles are combined in this process. A sheet of special paper receives an electrostatic image and is then dusted with powder and heated to make it permanent. Three 8½ x 11" copies can be made in a second. Can be used to take the output of computers and put the data on paper (utility bills, etc.). Handles 20,000 characters per second.

An Electronic Method of Development Control, by H. B. Archer, Southwest School of Printing Management. A new means of development control is described. Developed by J. F. Crossfield, of London, this method has been embodied into a machine called the Gammatron. The means of control depends upon density measurement of the photographic material during development. When the density difference of two control patches reaches a predetermined value, development is automatically stopped by means of an electronic circuit. Degree of development thus becomes independent of temperature, developer activity or emulsion contrast.

Universal Photogrammetric Electronic Rectifier, by Samuel W. Levine, Leonard Seide and James Lipp, of Fiarchild Graphic Equipment. An electronic line scanning machine is described which will line scan an oblique aerial photograph and pro-

duce a rectified print automatically. The machine incorporates optical-mechanical scanning and reproduces by means of an ultrasonic light modulator. The rectifier will handle camera formats up to 9 x 18", focal lengths from 3 to 100" and tilt angles up to 80°. Scanning is done at 500 lines per minute. The basic theory of line scanning for aerial image rectification is discussed and the development of the equations for the computer required for the machine is given.

Drying of Overprinted Ink Films, by Paul J. Hartsuch, Interchemical Corp. A recently dried first down (1/D) ink films exerts a powerful catalytic effect on the drying of a second-down or overprinting ink film. As the 1/D ink film ages before being overprinted, its catalytic effect becomes less. Finally it produces an inhibiting action on the drying of the second-down ink.

By means of a "sandwich" technique it was possible to prove that the accelerating material from the 1/D dried ink is a vapor. It was found that this accelerating material was not a drier per se so it has been termed a "volatile drying accelerator." By a similar method it was shown that the retarding materials in aged 1/D ink films are not volatile at room temperature but that they can be removed from such films by prolonged heating at elevated temperatures.

The effect of changes in pigment, type of varnish, percent of drier in the overprinting ink were studied in connection with the formation and

amount of the volatile drying accelerator and the retarding materials.

Printing Studies with Black Inks, by J. J. Hammel, J. M. Fetako, W. D. Schaeffer and A. C. Zettlemoyer, NPRI. This study demonstrated that the nature of ingredients controls the transfer and print quality properties of inks. Rheological measurements are useful for predicting the relative printing properties of a series of inks only if the inks contain the same ingredients. The agreement of film splitting theories with printing results confirmed the importance of the low shear viscometric nature of inks.

Measurement of Ink and Printing Qualities, by Otto C. Stoessel, Jr., Aeronautical Chart and Information Center, U. S. Air Force. A means is presented to list and measure various qualities necessary to implement statistical quality control relative to lithographic printing. This includes consideration of printing qualities from the viewpoint of the purchaser of printed matter who has the responsibility of quality standards and from the viewpoint of the lithographic printer who must establish and maintain qualities in consideration of the requirements given him. It further takes into consideration two basic categories; measurement of material, i.e., paper, ink and measurement of printed matter, i.e., general process of applying the raw material.

Fiber Optics for Data Recording, by N. S. Kapany, Armour Research Foundation of Illinois Institute of

TAGA convention committee members (left) prepare badges and other material. From left, Albert Materazzi, Arthur Nugent and Raymond Geagh.



Not shown, chairman Robert Lefebvre. At right, panelists (l.-r.) Rogers, Bruno, Reid, McSweeney, Zettlemoyer and Materazzi.



Technology. A bundle of glass coated fibers, very thin is twisted into a desired shape to "bend" light. Applications for high speed photography, photocopying systems, image dissection, etc. High photometric efficiency as well as high resolving power are achieved. (Described by Mr. Reid as a "fabulous scheme for piping light around corners.")

Color Diagrams, by Frank Preucil, LTF. Two differently shaped color diagram systems are described which show some graphic arts color problems and variables more effectively or more simply than previous commonly used systems. These are an inverted triangle to predict subtractive color mixtures, and a hexagon to chart both hue and printed color strength variations without the use of equations or mathematics.

Spectral Sensitivities for Color Separation, by J. W. Gosling and J. A. C. Yule, Eastman Kodak Co. To ensure that colors which look alike photograph alike, the spectral sensitivities in the color separations must conform to visual color-mixture curves. This paper extends Neugebauer's methods and demonstrates the procedures involved in practice.

Too Much Light in Our Eyes, by Nelson W. Taylor, Minnesota Mining and Mfg. Co. The levels of illumination recommended by the Illuminating Engineering Society are in some cases so high that they raise serious doubt as to whether a correct interpretation is being given to the data of threshold contrast upon which such recommendations are based. A new interpretation is given which leads to results more consistent with good eye practice and which shows that the eye is best able to detect small differences in luminance when the illumination is only a few foot-candles.

The discovery that the energy required per photoreceptor to detect contrast is at a minimum at or near one foot-lambert may seem strange on first reading. However, this luminance is not far from that of outdoor movie screens, nor from that of radar screens which must for military reasons be operated at the most ef-

ficient visual level. We are all aware of the restful effect created in many restaurants by a low level of illumination. One well known chain of restaurants makes a practice of turning on more light during the noonday rush hour in order to speed up the eating habits of their customers and thereby serve more people. After the rush period, they reduce the light level. It is also a common practice in churches to maintain a relatively low light level so as to create a relaxed feeling and to reduce tensions.

Visual fatigue or eyestrain would be minimized if the general level of interior illumination were well below those levels advocated by the illuminating engineering industry. However, it is recommended that high acuity is necessary in certain types of work. In such cases, auxiliary local light sources such as desk lamps or spotlights should be provided. *Trying to see with too much light is like trying to listen to music or conversation against a background of noise.* We are all aware of the effect of glare or dazzle to reduce visibility of printed matter. The pupils of the eyes close as much as possible to counteract the brightness, but usually this is not enough to solve the problem. The solution is to reduce the brightness.

In conclusion, it is suggested that the best level of illumination for foveal vision is that minimum level which gives adequate acuity for the particular visual task.

Logetronic Color Correction, by Dwin R. Craig and John N. Street, LogEtronic, Inc. The LogEtronic Color Separator is designed to help one man make one set of color separation negatives in one hour. The Separator electronically accomplishes color correction masking, highlight masking and shadow masking—producing continuous tone separations, from either positive or negative transparencies, at enlarged or reduced scale. It is inherently simple, reliable, and flexible enough for use in trade shops where the typical case is the special case.

Automatic Electronic Proofreader, by E. R. Kramer and J. B. O'Malley,

Airtronics International Corp. This paper pertains to an automatic electronic proofreading system for "proof-reading" that punched tape which operates automatic typesetting equipment. Errors are sensed by comparing the character codes on the punched tape with the characters on a typewritten draft.

The "Inkatron" Automatic Ink Control System, by Herbert L. Weiss, Crossfield Electronics, Inc. The problem of monitoring and controlling ink film thickness on sheet-fed presses is outlined. A brief history of the problems and the resulting equipment and its application to sheet-fed presses is explained. The Inkatron serves as a continuously operating densitometer which measures ink film density on the printed sheet and automatically adjusts ink flow from the fountain to maintain the color at pre-determined standards.

The system is far more sensitive than the human eye. In actual production it has been shown that the system can provide automatic ink control through long press runs without visible color variations, sheet to sheet. The control measures ink density at a single control area in each color. Extensive operations in actual production have shown that measurement at a single control point is sufficient for fountain wide adjustment of the ink. By automatically holding the ink to very close tolerance at the control area, color variations across the sheet can be held to a level at which they are invisible to the human eye. Although the Inkatron has been developed with sheet-fed offset presses in mind, it is adaptable to all types of sheet-fed presses.

New Developments and Trends in Lithography, by Michael H. Bruno, LTF. Despite the research that has been done, lithography still has some limitations that can restrict its future growth. These are (1) the variability of the ink-water balance, (2) the need for special characteristics in paper, (3) the use of tacky inks, (4) the possibility of slur in the impression when printing on smooth surfaces, (Continued on Page 113)



Quality Control panelists: Standing (l.-r.)—Bianco, Pollner and Johnson. Seated—Barnes, Carnegie and Morgan. They took part in NAPL session.

NAPL dispatches six sentinels after that elusive maiden—

Quality Control

THE elusive nature of quality control and its possible applications to lithography were the main points of discussion at a meeting of the National Association of Photo-Lithographers, held June 9, in New York. Two hundred members of the association heard a panel of six attack the problem in an attempt to pin it down to the level of workability for lithographic shops.

As defined by George C. Carnegie, Consolidated Lithographing Corp., moderator, "quality control is a relative term, which has different meanings, according to viewpoint. To the lithographer, it means good materials and workmanship; to the buyer it means a good finished product."

To help in the search for quality control, Mr. Carnegie was joined by Russel K. Johnson, DuPont Co. printing plant; Jeremy Barnes, Barnes Press Inc.; Louis D. Pollner, Consolidated Lithographing Corp.; J.

Tom Morgan, Litho-Krome Co.; and Vito Bianco, U. S. Printing and Lithograph Div. of Diamond National Corp.

In his talk, entitled, "How We Installed Our Quality Control Program," Mr. Johnson, noted the points in the system of quality control used at the DuPont printing plant. The objective of the system, he said, is to build quality into the job as it runs, rather than to correct errors when it is finished. "Experience shows that such an approach is cheaper for the printer in the long run. A good quality control system costs 50 percent less than a simple inspection operation, which is the method presently accepted by most printers."

Johnson Describes System

In describing his plant's system, Mr. Johnson said it has been found that a sample of 25 sheets out of

every thousand is the most efficient number for control. As a sample sheet is pulled it is given to an inspector, who takes it immediately to an inspection station where it is compared to the standard set for the job. Any deviations from the standard are immediately reported to the pressman, who then applies the proper corrective measures.

In inspecting the samples, such instruments as densitometers and color charts are used, in addition to standard visual inspection.

In order to achieve the right psychological atmosphere, Mr. Johnson said that quality control should be looked upon as "another tool to be used in producing a job, in the same way as a press or a camera is used."

Jeremy Barnes, who spoke on "Planned Plant Engineering," referred to the importance of choosing equipment carefully, not only for its present uses but for profitable future development. He said his company has continuously cooperated with various equipment manufacturers to help develop improvements on machinery and processes.

He said further that such items as air conditioning and sound proofing can be very instrumental in boosting a plant's profit margin. Another factor of plant engineering, whose importance is often overlooked, is proper maintenance. Not only does a good maintenance program improve present output, but it also insures good future production.

Among the "Quality Control Tools" available for the lithographer Mr. Pollner cited the dark field illuminator used to maintain a standard checking procedure on dot halo in negatives, an important item in half-tone quality control. "Another important platemaking control tool," he said, "is the sensitivity guide, which is readily available to everyone."

Illuminated Magnifier

In the pressroom, Mr. Pollner, said, an illuminated magnifier is quite useful for checking plate surfaces on the press. Another idea for use in the pressroom is a side guide pullover scratch mark on the plate,

(Continued on Page 133)

*Continued dramatic gains for lithography
are revealed in this report on the 1958*

CENSUS

By Cyril M. Wildes

Chief, Chemical & Wood Products Industry Div.
U.S. Bureau of the Census

Conclusion

WE have seen in the preceding charts already shown, (and this will be further borne out in charts that will follow) that printing has far outstripped the population rise, including the so-called "population explosion" starting in the 1940's. Beyond that, one could say that the course of printing receipts testifies to our ever-advancing rate of literacy, not to mention the need for more and more advertising to move the goods and services pouring out in greater abundance as our spending power and desire for a higher standard of living keep growing. And we have become more automation and record conscious, which also supplies an underlying support of demand for printed forms and service.

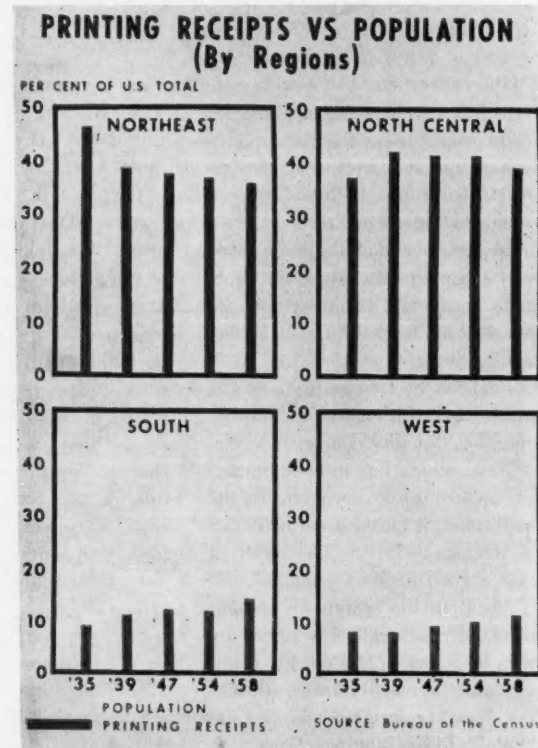
I have spent some time on what we mean by growth, on how to measure it, and how to know an industry deserves to be so labeled, but I believe that you will agree that to treat the subject "growth pattern" one must observe critically and objectively the basic facts. Everything we have seen and talked about has been in total U. S. terms. The charts you are about to see take these national figures and break them down on a *regional* basis.

The first showing by regions gives you a picture—to be more accurate, four pictures of printing receipts compared to the population, starting with the depression years of 1935 and 1939 and then taking every Census year to date. In each panel the left hand regional bars show by their height the percent or share each region has of U. S. total printing receipts for a given year while the right hand bars show the percent of the U. S. population each region had for each of these years.

Let's take the Northeast in the upper left-hand corner as an example. Here you can see that this oldest (and once most populous) region of the country consistently gets a larger share of the total printing bill paid by the nation than its share of the U. S. population. It is interesting to point out that the margin of the Northeast's dominance in printing is no longer as great as it was before the War. Note how the "spread" between the bars—that is, in their height—is becoming smaller. For example, you will see that in 1935 the region had 28 percent of the people and 46 percent of the printing, but

in 1958, with 25 percent of the people, it now does 36 percent of the printing.

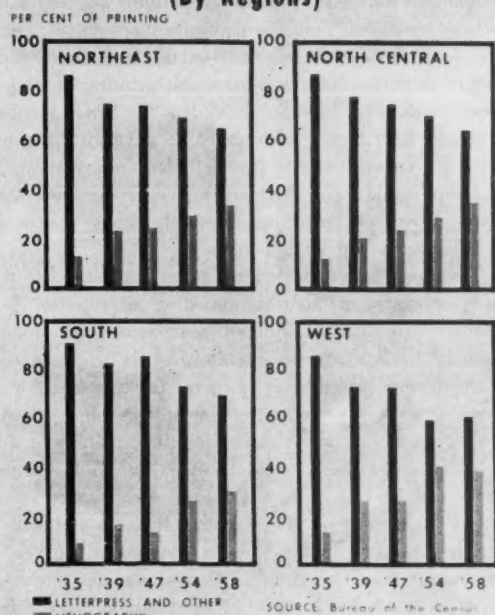
When you look at the South (lower left panel) or the West (lower right) a quite different picture comes to light. In these more recently developed industrial regions we find, as we would expect, that their share of the country's printing receipts still has some distance to go to catch up with their regional share of the nation's population. In each case you can detect even on these miniature panels that these regions are doing more and more of their own printing. The net effect of this "Print More at Home" movement does not, of course, mean that



the Northeast and the North Central (shown in the upper right panel) are not continuing to grow both in absolute and per capita terms—merely that the proportionate shares of the U. S. printing market commanded by these older printing centers have been gradually diminishing.

The next chart is also done on a regional basis—same four panels.

LETTERPRESS AND OTHER VS LITHOGRAPHY (By Regions)

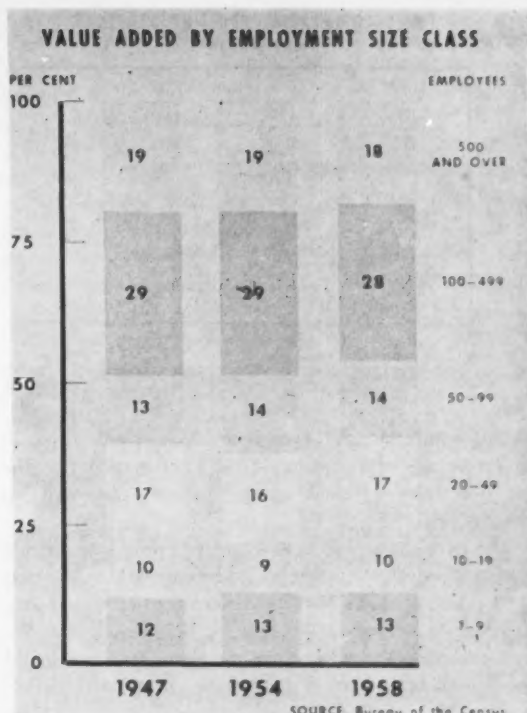


We are now comparing the regions in terms of how their total printing activity has been distributed between letterpress and lithography. To me this turns up some interesting sidelights.

Each of these regional charts shows approximately the same degree of shift in the printing processes used during this 23 year period. The variation in the percent of the total now done by lithographers—ranging as it does from a low of 30 percent in the South to a high of 39 percent in the West—still reflects a reasonably consistent distribution across the United States for lithography. The West is the only region which has regularly over these two and a half decades used lithography at a rate above the national average.

The next chart carries the title of "Value Added by Employment Size Class."

Value added by manufacture is a measure of the value created by the manufacturing processes involved in moving raw materials or partially fabricated materials through to the stage of manufacture when the product leaves the plant. It is calculated by subtracting the cost of materials, fuel, electric energy, and cost of contract work from the value of the products leaving the plant. As you first look at this chart and try to find some move-



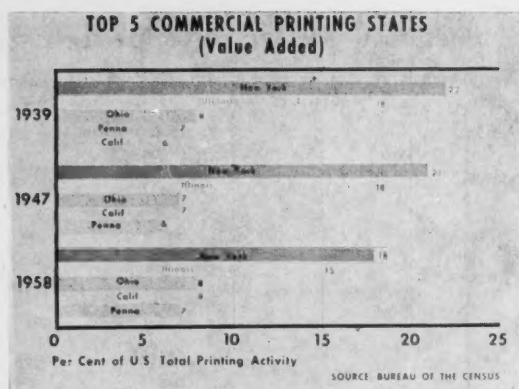
ment in the lines, you may wonder why I thought it worthwhile even to show it. But it is that very lack of movement or change from 1947 to 1958 that is significant.

Here we have visual evidence that the share of the printing business received by plants of small size, medium-small, medium, or large (take any employment size class you want) has remained virtually *constant* over the past 10 years. Earlier data were not available on a comparable basis. This is a truly interesting fact, and indicates that mass mergers were not taking place during this period. It would seem also to show that the small and medium-size printers are competing effectively in their sphere of the market. As you can see, the largest size plants (500 or more employees) had 19 percent of the market in 1947 and 18 percent in 1958. The smallest size class (1-9 employees) shared 12 percent of the market in 1947 and 13 percent in 1958. In fact, both of the largest size class groups dropped one percentage point.

The next chart shows the "Top Five Printing States in the U. S." for the years 1939, 1947 and 1958.

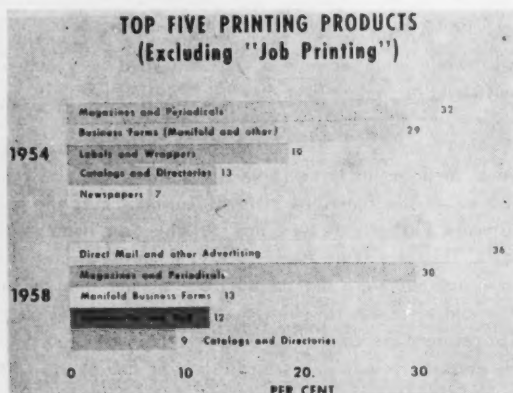
Ranking of States

Again, as with the size class chart, value added has been used to determine the ranking of the states as well as for calculating how much of the nation's printing activity each received. While the same states make up our list of the "Top Five" over this 20-year span, you will observe that, with the exception of California, none has improved its share of the U. S. total. Only Ohio among these has held onto both its relative share (8 percent) and its ranking in the ladder (third). Of par-



ticular significance, however, is the drop of several points in percentage of the share of the total market that the top two states—New York and Illinois—enjoyed two decades ago.

The next chart reflects an abortive effort to construct statistical information that would be comparable, ranking the top five products of the commercial printing industry in order to dramatize the changes in the industry. We first examined the statistics in the year 1939 and found those to contain certain limitations—principally defini-



tional—but also weaknesses in identifying and reporting specific products. The year 1947 presented many of the same limitations. Thus, this chart is confined to showing the 1954 and 1958 census results.

Actually, I wish the chart would tell us the story that I should like to present. For example, in the 1954 lines you will not find advertising printing since it was "lumped" with job printing, although you and I both know that this was a principal product, if not the leading product, in that year. As explained earlier, lack of product detail was one of the real deficiencies in the 1954 and earlier Censuses. The highlight of our efforts for 1958 was the singling out of individual products for separate measurement. Coupled with this was the very fine job done by the printing industry in reporting its individual products and careful professional review of these reports by our staff.

Analysis of the business forms printing also reflects lack of comparability in the two years because of the distinction we have made between manifold and other business forms, and for the first time we recognized financial and legal printing categories. Likewise, comparability of data for labels and wrappers is seriously affected because of re-definition of these products to attempt to establish on a consistent basis a distinction between labels and wrappers. Coming up with a clearly understandable distinction between labels and wrappers was not an easy task, but full cooperation by representatives of these two industry segments represented a working definition which tells us for the first time, and I believe rather accurately, how much printing of each of these items was done in 1958. In fact, had we been equipped with better information in reviewing the program for annual survey product class information, we probably would have provided for measuring label printing and wrapper printing separately—thus you would have had clean-cut annual totals.

The annual survey of manufactures is designed to produce, among other important measures, information about groups of products considered to be reasonably homogeneous in character. We have established six product classes in the letterpress category, two in gravure, one for all screen process printing, seven for lithographic printing, one for engraving and plate printing, and finally a total for manifold business forms. However, manifold business forms will be broken into three product classes in the final 1958 Census of Manufactures Bulletin and will be introduced in the same way in the annual survey of manufactures beginning in 1959 to show, separately, receipts from production of (1) continuous, (2) unit-set (snap-out types), and (3) salesbook and other.

Each of the above represents large dollar values. Although some are relatively smaller than others, none are less than \$50 million. Thus, for the first time your industry has a chance, year-by-year, to watch the trends in these products until the year 1963 when each will be supported by full product detail comprising these totals. That's the year when we do the full count again in the complete Census. Contrast, if you will, this array of statistical information with what has been the pattern of presenting data about your products in the past. Heretofore, we gave you a one-line total for lithographic printing and a one-line total for letterpress and all other printing combined, except engraving.

The printers and lithographers who are selected in the annual survey of manufactures sample will be asked to break out this information in these broad categories, estimating when book records are not available. The additional work involved in relation to the job of supplying all the other information on the annual survey report would, in my judgment, be relatively small. I would ask a continuation of interest and cooperation that you have shown in the past in supplying the information. Then you, as businessmen, will be kept currently informed of the developments in your industry on at least a national

(Continued on Page 126)

Questions and Answers on

MICR

FOLLOWING are some of the most frequently asked questions about MICR (Magnetic Ink Character Recognition) which have come to the attention of Maurice Adler, vice president of California Ink Co., Inc. and one of the pioneers in the magnetic ink field. According to the company, California Ink developed the original magnetic inks in 1950 and has worked closely with many lithographers who have entered the field.

Other basic recommended reading matter for anyone contemplating getting into MICR is Bank Management Publication No. 147, available at \$1 from the Bank Management Commission, American Banking Association, 12 East 36th St., New York. This complete manual covers requirements, tolerances, official type fonts, testing instruments, etc.

Five Most Common Causes of Difficulty

1. *Voids*—All type must be clean and unpitted so there will be no voids in the reproduction of the E-13B type characters. Voids are generally due to poor linotype matrixes, castings being too hot or too cool, worn cuts, poor make-ready or too light an impression. Voids may also be caused by a failure to cover all pin-holes in the stripping and opaquing of negatives.

2. *Beading*—Beads formed around the edge of the characters are generally caused by too much ink and too heavy an impression.

3. *Embossure*—This is the result of too soft a backing sheet and too heavy an impression.

4. *Set-Off*—This usually accompanies bead formation and is caused by too much ink and too heavy an impression.

5. *Weak Signal Strength*—In lithography it is very important to maintain the proper balance between ink and water. Over-wetting may cause emulsification and weakening of the ink.

Can ink additives be used?

The basic rule: No. The two exceptions: 1. Up to 3 per cent varnish can be added if necessary for better flow; 2. up to 2 per cent drier.

Reprinted from the California Ink Co., Inc. publication, MICR Questions and Answers, available from the company at 545 Sansome St., San Francisco 11, Cal.

Are magnetic inks available in color?

Yes. They are now offered in red, brown and green. The colors are not very brilliant, however, because of the difficulty of getting magnetic color pigments with the proper electrical requirements.

What, if any, differences will pressmen notice between magnetic inks and conventional inks?

The magnetic inks are "shorter"—don't follow the fountain quite as well as regular inks. Pressmen should allow a little longer for complete coverage of distributor rollers. Fountain agitators are recommended.

Are magnetic inks available for all printing processes?

They are available for all variations of letterpress and offset.

Does the use of magnetic ink require a reduction of press speeds?

No.

How do you suggest we speed up the dry to prevent set-off?

It is probable that web printers will swing to heatset offset and letterpress magnetic inks. Use caution in adding driers because they will increase the chances of the ink drying on the press.

Why all the concern about set-off on one-side business forms?

The electronic reading head reads right through the sheet. Magnetized ink on the back side (even on an IBM card) will create a false signal.

Can the same offset magnetic ink be used on a wide range of paper stocks?

No. For example, a sulphite stock will take an entirely different formulation. Even minor variations in stock may require a formula variation. Work closely with ink makers experienced in this specialized field.

Can we use dry sprays or wax sprays on magnetic ink jobs?

It is far better to use heating equipment. Sprays may gradually rub off on the reading head and other parts of the electronic equipment and gum up the machines.

If the inks are magnetic, won't they cling to metal rollers?

The word "magnetic" is somewhat misleading. The ink itself is not magnetic, but when the form is being processed it passes through an electric field which magnetizes the ink for a brief period.

What is the shelf life of magnetic inks?

Indefinite, so far as shown by our tests over a two year period.

Doesn't the heavy iron oxide pigment settle out?

Not in offset or letterpress magnetic inks.

What testing instruments do we need?

At the press you need a small 12X pocket comparator with E-13B reticule or a 20X binocular microscope to check for coverage, ink density, voids and embossment. Also a printer's plastic gauge to check the field boundaries, skew and line width. Test equipment, suitable for evaluating the signal level of printed characters, is now available from several sources.★

Litho Brilliant In Chicago Design Show

By H. H. Slawson
Chicago Correspondent

LITHOGRAPHY made a brilliant showing in the 33rd annual "Design in Chicago Printing" exhibition, sponsored by the Society of Typographic Arts and shown for four weeks, in May and June, at the Chicago Art Institute.

From about 1,000 entries the judges selected 121 as the "cream of the crop." To these was awarded the society's Certificate of Excellence, with copies going to printer, client, art director and designer of each piece.

Of the 121 so honored, 48 were produced by 22 commercial lithographers and the others were distributed among letterpress and gravure printers, also one flexographic and one silk screen printer.

Among the lithographers, Veritone Co. and Runkle-Thompson-Kovats each produced 6 of the winners; Photopress 5; Cadillac Printing Co. and Hillison & Etten Co. 4 each; H. L. Ruggles Co., 3; R. R. Donnelley & Sons Co. and Huron Press, 2 each; while the following were credited with one each:

Rayner Lithographers, Peerless Litho Co., Inland Lithograph Co., Inland-Magill-Weinsheimer Co., Ryder-Dickerson, Lincoln Printing Co., Low's Reproduction Service, Twentieth Century Press, Container Corp. of America, Acme Carton Co., Print-o-Lith, Nat. Office Supply, Olson Pub. Co. and E. F. Schmidt Co. The last two named are Milwaukee concerns, the others all located in Chicago.

Among the 17 categories of printed products represented in the show the lithographic winners were found in the following 12: brochures and folders, greeting cards,



book jackets, books, annual reports, announcements, booklets and catalogs, complete magazines, packages, posters, stationery and "miscellaneous."

Reviewing some features of the Chicago show, judges commented on the frequent tendency of printing designers "to do the safe thing, the sure thing with a result that is trite and contributes neither to graphic art design nor to lithography." Speaking about self-advertising pieces, prepared by lithographers, one member of the arrangements committee, William Seay, pointed out however, that the printer-advertiser "can let himself go." This, he said, is apparent in the poster calendar created by the Veritone Co. for its own use.

Carl Regehr and Rhodes Patterson, the designers, and George Suyeoka, the illustrator, Mr. Seay said, "have created a quality image, through use of new and exciting design treatments. This is an outstanding example of both fine printing and lasting advertising design." (Photo 1)

Mr. Seay, who is director of creative services for Meyer Both Co., advertising agency, praised highly, also the Veritone Co.'s "Great Ideas" poster (Photo 2), designed by John Massey for Container Corp. of America. In Europe, he said, the lithographed poster has been an art form as well as an advertising piece for many years. "Unfortunately," he added, "this has rarely been true in our own time and place. For that reason Veritone's "Great Ideas" poster provides an encouraging note in this year's

(Continued on Page 126)

MODERN LITHOGRAPHY, July, 1960

HAPPY?

By Leslie E. Munneke
Department of Management
University of Houston

SUPERVISORS are continually faced with the problem of stimulating workers to greater productivity. In order to accomplish this feat, the supervisor needs to know his people. He must be able to recognize those cases which represent only dissatisfactions, for whatever reason or reasons, and take appropriate action. He must also be able to recognize those cases which represent worker *maladjustments* of a more serious nature.

At one time or another each worker complains about his job, his supervisor, or his company. The majority of these complaints are of small consequence, but the wise supervisor will always give them consideration. This constitutes a part of what can be referred to as "knowing your men", and the supervisor who knows his men has taken the first step in the direction of employee motivation.

Meaning of 'Motivation'

Motivation has been defined in our field as a process of appealing to the desires, rather than the fears of workers. The supervisor has the task of convincing the individual that the harder he works for the company, the greater will be the individual gain derived. This may be termed "positive" motivation.

Motivation may also be negative. In this case the employe takes action as a result of force or fear. He works only because of the economic conse-

quences to himself and to his family if he does not. No one will deny that there are instances where the negative type of motivation is required, but experience in industry tends to bear out the proposition that negative motivation should be applied only where all else has failed.

Sources of Dissatisfaction

Since nearly all employes develop dissatisfaction with their jobs, the task becomes that of discovering possible sources of dissatisfaction, followed by the necessary corrective action. Little in the way of employe motivation can be accomplished until these difficulties have been resolved.

Possible sources of worker dissatisfaction would include such things as:

I. *The Individual himself because of:*

1. Misunderstanding.
2. Ignorance
3. Conflicts between wants and abilities
4. Imagination
5. Poor attitude

II. *The Individual's reaction to environment*

1. People
2. Things
3. Condition

III. *The Supervisor Through*

1. Carelessness
2. Indifference to the job or to the individual
3. Things he says—or doesn't say
4. Things he does—or doesn't do

In seeking to improve the situation, the supervisor may need to make adjustments. He must show the employe that these adjustments are necessary, fair and unavoidable.

It is best to use the team approach, utilize the industrial relations and medical departments and the supervisor, in dealing with "troubled" workers. But always keep these points in mind:

1. Know your workers
2. Be interested in their welfare
3. Be fair and competent

The printing and lithographing industry has been obsessed, of recent years, with the question "How will we obtain adequate manpower to staff our plants and offices in the years to come?" This is an important question, to be sure, but equally important is the question "How will we treat those employes we already have so that they will continue to be happy, productive workers?" Dr. Munneke provides some thoughtful suggestions in this discussion of Human Motivation.

From a talk given before the Seventh Annual Texas Printing Management Conference, April 30, Hotel Galvez, Galveston, Tex.

Litho Schools

Canada—Ryerson Institute of Technology.
School of Graphic Arts, 50 Gould St.,
Toronto, Ont., Canada.

Chicago—Chicago Lithographic Institute, 1611
W. Adams St., Chicago 12, Ill.

Cincinnati—Ohio Mechanics Institute, Cincin-
nati, Ohio.

Cleveland—Cleveland Lithographic Institute,
Inc., 1120 Chester Ave., Cleveland 14, Ohio.

Houston — Univ. of Houston, Cullen Blvd.,
Houston 4.

Los Angeles—Los Angeles Trade Technical
Junior College, 1646 S. Olive St., Los An-
geles 15, Calif.

Minneapolis—Dunwoody Industrial Institute,
818 Wayzata Blvd., Minneapolis 3, Minn.

Minneapolis Vocational High School, 1101
Third Ave. South, Minneapolis 4, Minn.

Nashville—Southern Institute of Graphic Arts,
1514 South St., Nashville, Tenn.

New York—New York Trade School. Litho-
graphic Department, 312 East 67th St., New
York, N. Y.

Manhattan School of Printing, 72 Warren
St., New York, N. Y.

Oklahoma—Oklahoma State Tech., Graphic
Arts Dept., Okmulgee, Okla.

Rochester—Rochester Institute of Technology
Dept. of Publishing & Printing, 65 Plymouth
Ave., South Rochester 8, N. Y.

Pasadena—City College, 1570 E. Colorado St.,
Pasadena, Cal.

Philadelphia—Murrell Dobbins Vocational
School, 22nd and Lehigh, Philadelphia, Pa.

Pittsburgh—Carnegie Institute of Technology
School of Printing Management, Pittsburgh.

San Francisco—City College of San Francisco.
Ocean and Phelan Aves., Graphic Arts De-
partment.

St. Louis—David Ranken, Jr., School of Me-
chanical Trades, 4431 Finney St., St. Louis 8,
Mo.

Vancouver—Clark College.

West Virginia—W. Va. Institute of Technology.
Montgomery, W. Va.

Trade Directory

Internatl. Assn. Ptg House Craftsmen
P. E. Oldt, Exec. Sec'y.

Room 307; 411 Oak St., Cincinnati 2.

Lithographers and Printers National Association
Oscar Whitehouse, Exec. Dir.

1025 Connecticut Ave., N.W., Wash., D. C.

Lithographic Tech. Foundation

William H. Webber, Exec. Dir.

131 East 39th St., New York 16, N. Y.

National Assn. of Litho Clubs

Raymond E. Geegh, Executive Secretary

1915 33rd St., S.E., Wash. 20, D.C.

National Assoc. of Photo-Lithographers

Walter E. Soderstrom, Exec. V.P.

317 West 45th St., New York 36, N. Y.

National Metal Decorators Assoc., Inc.

James G. Smith, Secretary

P.O. Box 506, Crawfordsville, Ind.

Printing Industry of America

Bernard J. Taymans, Mgr.
5728 Connecticut Ave., N.W., Washington, D.C.

4. Appeal to the things workers
value

5. Build up workers confidence
and sense of "belonging"

6. Develop proper attitudes

7. Add a personal touch with
workers

8. Know how to interview correctly

Worker Motivation

It has often been said that people
are *different*—so different, in fact,
that it becomes a virtual impossibility
to analyse the differences. People are
also *alike*, and the supervisor who re-
cognizes this factor immediately re-
duces the task of "knowing" his men
to manageable proportions.

People may be said to be alike
in the following ways:

1. All possess certain natural drives.

2. All possess a desire for

a. Security

b. Recognition

c. Social Status

3. All possess a desire for accept-
ance from the group of which they are
a part.

Furthermore, it may be argued
that most people seek to derive much
the same thing from their jobs:

1. *Recognition of their personal
worth or value*

2. *Assimilation into the work group*

3. *Opportunity to progress*

4. *Close, working relationships with
their supervisors*

Related to these basic individual
desires is the philosophy of manage-
ment itself. In this connection, some
would argue that management has ful-
filled its function when steady jobs
are provided at rates of pay com-
mensurate with those prevailing in the
community.

The Department of the Army takes
the position that:

"... within whatever limits are im-
posed by legal and regulatory provi-
sions governing the public service,
responsible officials, including all levels
of supervision, should discharge their
personnel management functions in
such a way that employes derive per-
sonal satisfaction from their employ-
ment."

Among other things which a given
worker brings to his job is the *capac-
ity* to do the job. An individual who
lacks capacity for the job can hardly
respond to motivational stimuli.

Capacity to do a job depends upon:

1. Intelligence

2. Education

3. Aptitude

4. Experience

5. Work habits

6. Skills

7. Age

8. Health

Intelligent management will have
predetermined the degree of each of
these factors required of the worker
to perform a given job.

The degree of these factors re-
quired defines *hiring procedures*
which will assure the procurement of
those people who will *bring to the
job the capacity* to function adequa-
tely on their jobs. These are the people,
generally speaking, who respond to
the supervisor's motivational efforts.

Motivation and Training

Training is a motivational tool by
means of which employees may im-
prove their individual abilities and
thus become a more effective part
of the work-team.

Supervisors must stimulate, among
their subordinates, the desire to learn.
This can be accomplished by:

1. Pointing out importance of task

2. Showing that it is necessary for
job competence

3. Explaining the reason for the
training

4. Showing the employee that he is
not performing adequately

5. Arousing pride in workmanship

6. Linking up with previous experi-
ence

When the supervisor has succeeded
in arousing the interest of the em-
ployee, the latter is usually *ready* to
learn. By "readiness to learn" is
meant that the worker wants to learn,
sees a reason to learn, is willing to
learn, and has a desire to learn.

Increasing 'Will-to-Work'

After the employee has been selected
and trained, the supervisor's task be-
comes that of getting employees to do
their best. Recent scientific studies
disclose that certain supervisory prac-
tices contribute to better production.
These may be summarized as follows:

(Continued on Page 135)

Research for Web-Offset

**A leader in the field calls for a budget of \$250,000
a year to be used by a research organization like LTF**

By Hyman Safran
President, Safran Printing Co.
Detroit

Following are some pertinent excerpts from an address by Mr. Safran before the recent meeting of the PIA Web-Offset Section in St. Louis. For further details on Safran's experience with the process, see his article "What We Have Learned About Web-Offset," April MODERN LITHOGRAPHY, page 39.

ONE of the most encouraging facts that we have learned in web-offset is that high speeds surprisingly often enhance quality. We have operated four-color sheet-fed equipment in the past and have never done better printing at 4,000 per hour than we are doing right now at several times that rate and we are reaching for still higher speeds.

In addition, we have been able to perfect our techniques for converting letterpress plates to film. We find that the loss in detail when transferring from engravings to lithographic film and offset plates is frequently less than the normal loss in detail that occurs when electrotypes are made from the same originals. Excellent conversions have been made by the Brightype and the Translucent process and other methods are being researched now.

These new conversion processes have created for web-offset a new field of publication work which could heretofore be produced only by the letterpress process. We have been printing the *Automotive News* weekly magazine since 1955 and on that one publication alone we have converted more than 10,000 letterpress advertisements into off-set plates. These

range from mediocre one-color stereotypes to fine four-color copper engravings—all with excellent results. I am confident that *Automotive News* would not now be interested in producing their weekly magazine by any other process.

They are now able to accept letterpress plates, film negatives and art work, and have even accepted continuous tone gravure positives—all of these have been successfully converted to web-offset. This has meant an important *plus* in versatility and has enhanced their opportunity to sell more space.

* * *

No accurate forecast of the future of web-offset is possible without recognition of some of our most difficult problems:

1. *There are no skilled craftsmen available.* Because this field is new—the men have to be trained in your plants with some help by the erectors, and this training takes time, patience and money.

2. *High speed equipment is still very scarce.* The equipment manufacturers thus far have had very little pressroom experience to guide them in designing presses for the future. The maximum speeds up to now have been under 800 f.p.m. compared with much higher speeds in gravure and letterpress.

3. *Paper and ink problems are not yet solved.* The paper and ink manufacturers, while they have made great progress in recent years, have not yet discovered the ideal ingredients for web offset printing.

4. *It is human to resist change and to fear the unknown.* Printing buyers have resisted any change and many have not even investigated this new method of production.

* * *

Like any web-fed press, rotary offset is not as versatile as sheet-fed offset and forces the printer to produce better within narrower limits; this specialization serves his customers better than if he becomes a Jack-of-all-trades-and-master-of-none. We at Safran have concentrated our efforts on web-offset color printing and have focused our attention in the direction of doing that particular job well. This policy is effective for us and I feel confident it will work as well for others.

* * *

Even if we assume that the problems in web-offset today that I have referred to are capable of solution, we must remember that letterpress and gravure are by no means stagnant. Progress in plastic letterpress plates and reduction of makeready taken together with the constantly growing speeds of superb letterpress rotary heat set equipment, together with a 20-year head start in the development of skilled manpower, make letterpress a formidable competitor for any printing job.

* * *

Gravure, too, is beginning to develop more economical methods of producing cylinders and is employing accurate electronic register controls—all of which, as is so well demonstrated in Europe, point to an
(Continued on Page 131)



two billion lithographs a year!

By Tom Burrier

TWO billion lithographed stamps, give or take a few million, are produced each year by lithography. In addition extra millions of postal bits are credited to intaglio and heliogravure. That's big business!

There is one important reason for the litho postage boom: stamp collectors.

Of an estimated 90 million in the world, 20 million philatelists live in North America. The lifeblood of the hobby is new, colorful stamp issues. And the world's smaller nations are happy to oblige, with a flood of new designs executed by master lithographers. The reward is hard American dollars at small cost.

The litho processes are a natural for Monaco, Honduras, Belgium, the Spanish colonies, Switzerland. Costs are lower than other printing methods, with higher quality usually obtained. These countries usually issue only a million copies, sometimes less, with a time limit on their postal validity. But the multi-colored beauties are eagerly sought by collectors. Monaco, for example, may turn out 90 different stamps each year; the Monacan government is largely supported by stamp collectors, and not by the publicity attendant upon a recent marriage, as some observers may think.

The U. S. Bureau of Engraving & Printing figures a *minimum* of 120 million copies for each of perhaps 10 new commemoratives printed each year, with regular issues running much heavier. Then, there are duck, cigaret and revenue stamps and a host of other printing jobs. Costwise, multi-color printing is impossible with

existing methods and practically all U. S. stamps are drably single color.

The Bureau figured it had the problem licked when it bought a multi-million dollar Swiss-built Giori gravure press. It imported Swiss technicians to install this color printing wonder.

With the Giori it is possible to feed a single sheet and have it emerge printed in three colors. All three color plates are on one cylinder; three sets of inking rollers energize to apply ink as the particular color plate for each set comes into contact. It is a real marvel of synchronization. One color is printed and a wiper removes excess ink just before the second set of rollers makes contact.

The joker was in the finished product. In previous methods the ink was set by heat. In the Giori, the multiple colors all are applied before a drying process of blank-sheet interleaving. This sometimes creates smudges at the edge of color areas. The alternative of leaving a thread-line of white space between colors was unthinkable to Bureau officials, accustomed to

turning out the most precise printing jobs in the world. They are attempting to perfect the Giori.

The Iron Curtain countries are very much in the litho stamp act.

Russia issues a new postage stamp at the pop of a vodka cork, and her litho designs are finally showing technical competence. Poland, Hungary and Romania issue a multitude of propaganda stamps. Italy and Japan favor photogravure, while West Germany leans heavily on intaglio. Most of the rest of the globe mails its letters with lithographed stamps.

The world's severest critic of printing is the advanced stamp collector. With microscope and magnifying glass he examines paper watermarks and scrutinizes printed designs minutely, hoping for the tiny flaw or error that may make his stamp a rare variety worth thousands of dollars. It's happened often enough to make the collector's search fascinatingly endless.

But two billion lithographed stamps takes a lot of searching!★

These colorful lithographed stamps were done in Spain.

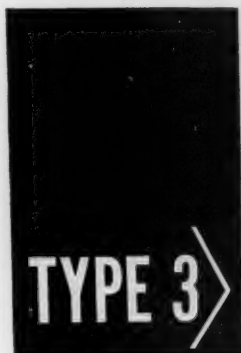




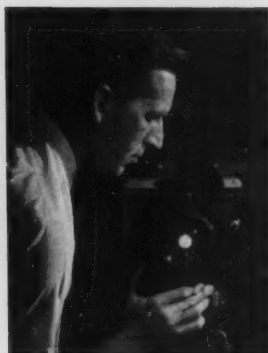
There's more here than meets the eye

Now... 3 members in the KODAK ESTAR BASE FAMILY

1. Kodalith Ortho Matte Film, Type 3, Estar Base 2. Kodalith Ortho Film, Type 3, 7-mil Estar Base 3. Kodalith Ortho Film, Type 3, 4-mil Estar Base



The extreme-contrast emulsion with the remarkable sensitivity to handle any kind of copy, regardless of density range involved.



WIDEST LATITUDES

Exposure variations of one-half to twice normal are possible. Less critical development times, too... a leeway of 2 to 4 minutes!



SOLID DOTS

Solid clean through to the base. Can be safely etched to the finest pinpoint. No veiling, halos, or soft edges around Type 3 dots.

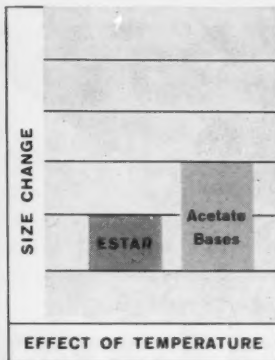


HIGH SPEED

Exposure of only 6 seconds at $f/22$ is possible with a same-size line subject illuminated by two 35-amp arcs at 4 feet from the copy.

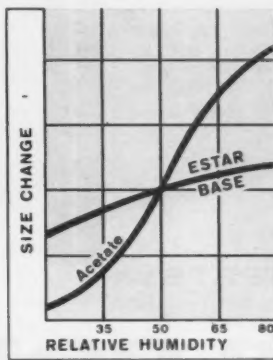


The new Kodak polyester base—flexible—with exceptional stability and superb emulsion adhesion.



TEMPERATURE EFFECT

This chart clearly demonstrates the stability of ESTAR BASE. It holds size two times better than conventional bases.



HUMIDITY EFFECT

Humidity variations have little effect on ESTAR BASE, as illustrated in this chart. Such quality simplifies critical register problems.



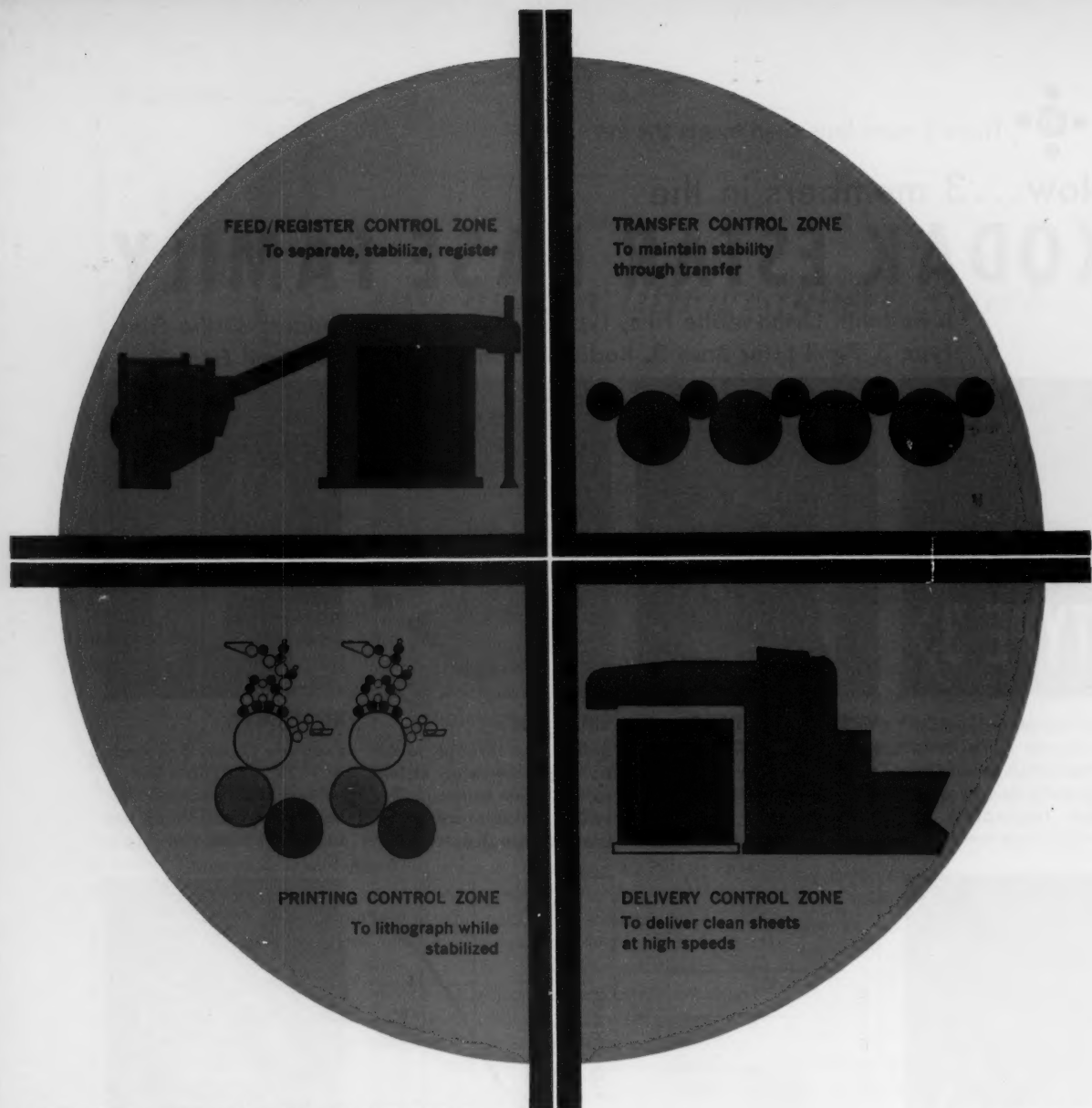
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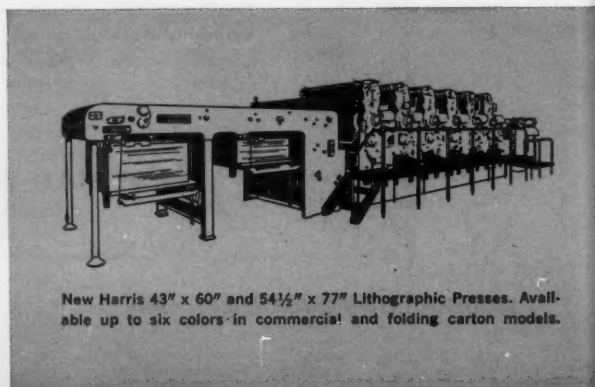
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Lithographer Prints 'Adventure Map'



Robert Delay (left), president of the Direct Mail Advertising Association, and Henry Hoke, Jr. (right), publisher of *The Reporter of Direct Mail Advertising*, review the 11 tours which are colorfully illustrated in the Houston "Adventure Map," held by L. U. Kaiser. Mr. Kaiser and his Premier Printing and Letter Service staff helped develop the map in conjunction with the Houston Chamber of Commerce.

A HOUSTON lithographer has been playing a very important part in that city's newest industry—tourism. Long famous as an important industrial city, Houston now boasts eleven different kinds of adventure, which are outlined in detail in an "Adventure Map" devised in part by Premier Printing and Letter Service.

L. U. Kaiser, president of Premier, went out on a limb when he conceived the idea of the map, which uses various colors to trace the outline of seven trips around Houston and environs.

As a representative of the Chamber of Commerce told ML, "Mr. Kaiser and his firm participated civically, realizing that it would be a period of years before they would be compensated. The map was custom made from basic research among tourist people to its completion to do a specific job of making tourists, as well as Houstonians, aware of the city's many tourist attractions.

Printer As Focal Point

"The printer can be a focal point in community work by such an endeavor," he went on. "It was proved in this case."

Production of the 18 $\frac{1}{4}$ x 24 $\frac{1}{4}$ " map was done on a 21 x 29" offset press for the pilot run. With the excellent reception given early copies, the negatives were stepped up on larger plates and run on a two-color press. One side is four-color fake process with duotones. The other side is in two colors with duotones.

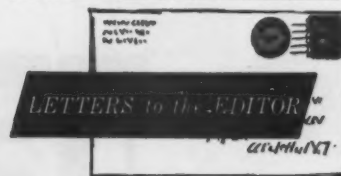
While the Adventure Map project was completed in committee form with the help of 14 C of C members, three Premier employees played a major role in its development, with Mr. Kaiser coordinating their efforts. Victor Green, part owner of Premier, did the photography and art and was cartographer. Wallace C. Bohland, advertising manager, did all the historical research necessary to plot the seven tours, then, with help from committee members, handled layout and copy. According to Mr. Bohland, completion of the map really gave impetus to the Chamber idea of promoting the city as a tourist attraction.

Companies Imprint Maps

Motels, hotels, restaurants and other companies in Houston, have ordered the maps by the thousand, with their names imprinted on the back. The idea was highly praised,

not only in Houston newspapers but in out-of-state publications, including the *Christian Science Monitor*.

Shown on the map are such adventures as Marks LH7 Ranch, residential browse, Lake Houston, Port of (Continued on Page 129)



Thanks from LTF

Dear Sir:

Our board of directors passed a resolution at our annual meeting this year officially expressing appreciation to you and your publication for your cooperation during the past year.

We are indeed grateful to you for the publicity given LTF, which has done much to help us in our efforts to improve the lithographic process.

William H. Bulkeley
President, LTF

Friends Like It Too

Dear Sir:

I am enclosing my check for a group of five new subscriptions and my renewal. I have enjoyed your magazine for several years and have shown it to fellow employees from time to time.

William C. Gerchow
Walled Lake, Mich.

Meetings

International Association of Printing House Craftsmen, annual convention, Hotel Biltmore, Atlanta, Aug. 7-11.

Printing Industry of America, 74th annual convention, Sheraton Park Hotel, Washington, D.C., Oct. 24-27.

National Association of Photo-Lithographers, 28th annual convention and exhibit, Hotel Conrad Hilton, Chicago, Oct. 5-8.

National Metal Decorators Association, 26th annual convention, Shoreham Hotel, Washington, D. C., Oct. 17-19.

Lithographers and Printers National Association, annual convention, Arizona Biltmore Hotel, Phoenix, Ariz., April 30-May 3, 1961.

Web-Offset Section, PIA, annual meeting, Edgewater Beach Hotel, Chicago, April 19-21, 1961.

National Association of Litho Clubs, 16th annual convention, Dayton Biltmore Hotel, Dayton, O., May 4-6, 1961.


Technical Association of the Graphic Arts, 13th annual meeting, Hotel Deshler-Hilton, Columbus, O., June 12-14, 1961.

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
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PRODUCTION CLINIC



What About 'Doctoring' Inks?

By Frank Arbolino

Plant Superintendent
Dexter Press, W. Nyack, N. Y.

WHAT is there to the general belief that in offset printing, the ink should be mixed differently to suit each of the varying kinds of paper? Is it true that a pressman is required to know just how to doctor inks so that they will work satisfactorily on the various papers?

It has been said that other variables besides paper make it necessary to doctor inks. Conversely, with few exceptions and with all other things being equal, one formula will work on most of the paper stocks. But many pressmen have asked this question: *Will ink that was mixed for coated paper run satisfactorily on offset paper?*

It has been said that in most cases the ink may be used as received, for the inks of today are made soft enough to run satisfactorily on the better grades of paper. Any reducing should be done carefully and only to a point where stock will not pile. The greatest difficulties are encountered when inks are reduced or "doctored" excessively and then must be reconditioned or brought back to consistency so they will not grease or scum. Another hazard in this connection is the excessive use of drier.

After running ink with excessive drier on a coated sheet I would advise that the ink be changed when going to an offset stock that is soft and absorbent.

Let us assume for the sake of analysis that we must work with a

very absorbent sheet of coated or offset paper. This is the type of stock that often results in ink chalking. The ink mixture in this case would have to be very soft, so that it would not pick the stock. It would also have to print clean, not be greasy, and have sufficient binding varnish and drier added to keep it from chalking.

The solution seems to rest largely on having a set of standards or controls. Various batches of ink used on a job should be carefully formulated and all ingredients, including varnish and drier, accurately weighed. In addition, the ink film thickness must be kept uniform on all sheets. Densitometers are widely used today to check any variation in film thickness on press sheets.

Three Questions:

When the subject of ink drying is discussed, the following questions generally pop up:

1. *Why do some jobs dry perfectly and others present difficulties?*
2. *Why will certain sheets in a run dry while others will not?*
3. *What causes only some portions of a sheet to dry?*

Actually this problem would not occur if caution and common sense were applied, and accurate measuring and weighing replaced guessing. Obviously, before you can start a job, the ink and paper must be on hand. Thus it is an easy matter to apply some of the ink to the paper, either by finger tapping or by draw-

ing down with a knife. This test should be made in the afternoon of the day before going to press, or at least four to five hours before press-time so the results may be observed and a record made of the exact length of time required for the ink to dry. As a matter of fact, it is advisable to make three tap outs at one time on the same piece of paper, varying the percentage of drier added to the ink.

When a job calls for overprinting colors, the same testing procedure applies and successive tap outs should be made. One distinct advantage in making these tap out tests in advance of a press run is that if there is any question concerning paper following the test, there is time to consult your ink supplier.

Preventing Crystallization

Q. I just finished a job in six colors on gloss coated paper. Some of the colors dried while others did not. This job had large ink coverage and where the colors overprinted they dried, but on blank paper the inks would run. Will you explain how I can mix the ink so that it will dry on the blank paper and not crystallize when it overprints other colors?

A: When running coated papers the first thing to determine is how fast the paper will absorb the vehicle. This can be done by tapping out some ink onto the paper and watching
(Continued on Page 135)

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Hantscho high-speed, 2-color web-fed offset press with folder. Photo shows delivery end of 44½ x 54" model. Custom-built for Conkey Division of Rand McNally & Co., in operation at their Hammond, Indiana plant.

TECHNICAL SECTION



An Ink Emulsification Test

By *D. I. Fothergill*

Alf Cooke Ltd., Colour Printers
Crown Point, Leeds, England

TINTING or emulsification problems in lithography are well known; indeed an examination of much lithographic printing would seem to indicate that a degree of emulsification is accepted as a necessary evil of the process, especially when one considers that a standard test for the identification of lithographic print is to examine the non-image areas for an ink scum.

The formation of an oil in water emulsion in the dampening system, which is the cause of tinting, can be attributed to the use of an ink with a tendency to form an emulsion in water. This characteristic may be either inherent in the ink formulation itself, or may be aggravated or caused by some addition to the ink by the printer.

The degree of tinting caused by a given ink can be affected by the type of work being printed, for example solid or half-tone, which of course governs the amount of water carried on the plate.

The tinting that occurs with certain coated stocks is sometimes attributed to the presence of surface active agents in the paper coating. It is felt that when these are leached into the dampening water they can cause an ink in water emulsification. It is, however, our experience that, when tinting occurs in these circumstances,

and the coating itself shows a positive reaction using standard tests (L.T.F. Foam test: Surface Tension test, J. H. Bitler, I.G.T.), this is not the sole cause of the tinting. The presence of an easily emulsifiable ink is still required.

Tinting on Press

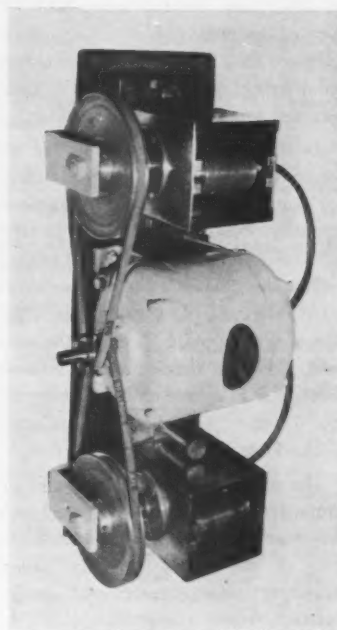
When tinting occurs on the press, and is of such magnitude as to adversely affect the final quality of the print, a modification to the ink or a complete change of ink is normally the only solution. Such a change is frequently of a hit or miss nature and leads to a loss of production time. Apart from this, modification by the printer himself can have disastrous effects on the other properties of the ink.

If we accept the foregoing, one might agree that it is desirable that some form of simple rapid testing should be available to the printer which will indicate the tendency of an ink to emulsify in water.

Although satisfactory techniques (Bowles and Reich, *British Ink Maker*, Feb. 1959) have been suggested for the evaluation of water in ink emulsification, it would appear that no quantitative or semi-quantitative test methods correlated with practical printing results have been suggested to deal with ink in water emulsions.

The following description will illustrate how we tackled the problem and obtained results which have been borne out on numerous occasions when the inks have been run on the machine.

The basic idea for a suitable emulsification apparatus was obtained from PATRA, who were using a two roll mill with full water immersion for basic research on the emulsification of oils in water.



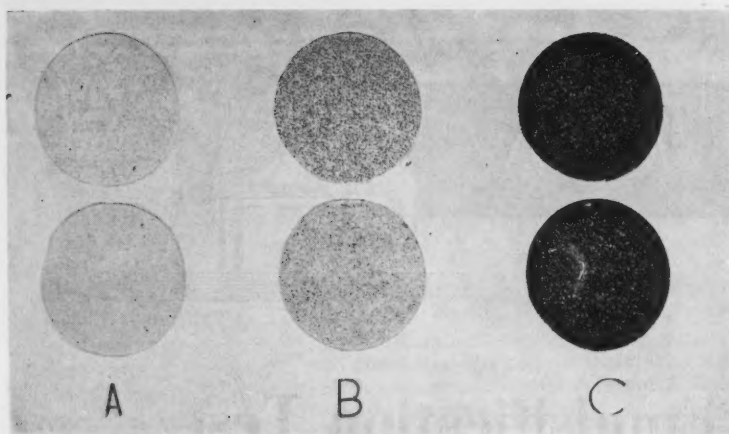


Figure 1

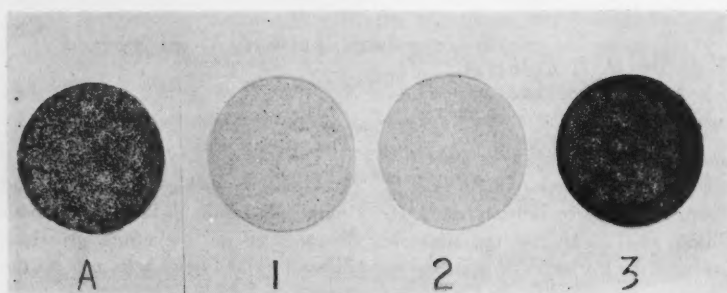


Figure 2

Our initial trials with two roll mills led us to the construction of a mill with solid brass rollers of two in. diameter, the bottom roller being driven at 330 r.p.m., the top being an idler located in side guides. The mill is enclosed in a cell to permit complete submersion in water and is constructed so as to facilitate cleaning.

In the test, 0.2 ccs of ink are allowed to distribute over the rollers for one minute and then a measured quantity (800 ccs) of water is poured into the cell—this amount just covers both rollers. After a further two minutes milling, 50 ccs of water are withdrawn from a point 2" below the surface. This is then suction filtered through a 1" orifice on to a Whatman No. 4 paper, resulting in a staining of the filter paper.

The intensity of stain obtained can range from very faint to strong, and this intensity is a measure of the tendency of the ink to emulsify under these particular experimental conditions.

Our experience with this apparatus has extended over the past 14 months, during which time some 100 inks have been assessed and the results correlated with the behavior of the inks on the press, all the inks tested being exactly as they are received from the manufacturer.

Some typical stains obtained are shown in Fig. 1, in which A, B and C are interpreted as follows:

A) Inks with no visual tendency to emulsify on the press.

B) Stains indicative of "average" lithographic inks, with very slight degree of tinting.

C) Stains from inks which gave rise to immediate and severe tinting and proved unusable.

It is quite common practice for printers to mix inks from several suppliers in order to match special shades of color. On the occasions when these mixtures give rise to problems of emulsification it is normally quite difficult to determine which of the inks is the root cause of the

trouble, but by testing each of the individual components on the apparatus it is a simple matter to identify the offending ingredients.

In Fig. 2, disc A shows the degree of emulsification of such a combination as outlined above. Three inks were mixed in the ratio 20 per cent Red 1, 40 per cent Red 2 and 40 per cent Red 3. After severe emulsification problems were experienced on the machine the three individual components were all tested separately on the emulsification apparatus. As can be seen from Fig. 2, Red 3 gave a very poor result. It is interesting to note that although this ink made up only 40 per cent of the mixture it was responsible for the unsatisfactory performance of the mixture as a whole.

An investigation into some of the test variables showed that:

1. Equilibrium of emulsified ink occurs after 1 minute's milling and remains constant up to at least 10 minutes:

2. Although oscillation of the rollers may be thought desirable to assist in ink distribution, it would appear that this is not critical.

3. Mills built to our specification and tested by four independent sources gave closely correlated and easily reproducible results.

Shows Ink Troubles

Although the apparatus and method are empirical and the results only semi-quantitative, our experience leads us to suggest that this test can be of assistance to the lithographic printer by indicating, prior to running on the press, those inks which would most probably lead to emulsification trouble. When emulsification has occurred on the press, this test has also proved to be an invaluable aid in the rapid location of the root cause of the trouble, and has resulted in the elimination of trial and error methods of rectification.

A lithographic ink is most probably a compromise between many conflicting requirements, of which resistance to emulsification is only one. Desirable as this quality is, it should not of course be acquired at the expense of other essential characteristics.★

TECHNICAL BRIEFS

These abstracts of important current articles, patents, and books are compiled as a service of the Lithographic Technical Foundation, Inc. They represent statements made by the authors and do not express the opinions of the abstractors or of the LTF.

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Photography, Tone and Color Correction

THE GENESIS OF THE FAIRCHILD SCAN-A-COLOR. Robert Brunhouse. *British Printer*, Vol. 72, No. 10, Oct. 1959, pp. 67-9, 3 pages. Some background history is given on events leading to the presence of the Fairchild Corp. in the graphic arts field and the introduction of the Scan-A-Graver in 1947 and other equipment since. The newest is the Scan-A-Color which produces same-size continuous tone color-corrected separations on negative or positive dimensionally stable film from transparencies or opaque copy, with accurate control of under color treatments. Controls can be adjusted to improve weak copy, to compensate for ink characteristics, and to accentuate highlight or shadow detail. A scanning choice of 340, 500, or 1,000 lines per inch is offered; at 500 lines a full size 8 x 10 in. set is claimed to be completed in 50 minutes. Two illustrations, a general view of the prototype model, and a schematic diagram.

SECOND THOUGHTS ON COLOR VISION. Anon. *Perspective*, Vol. 1, No. 3, 3rd Quarter, 1959, pp. 284-8, 5 pages. A discussion of recent work in which Dr. Land of Polaroid has demonstrated that two

color projection gives a full range of color sensations. Some history of two color processes is given. Three charts and two references.

A FEW CAMERA TRICKS. John Pince. *National Lithographer*, Vol. 66, No. 11, Nov. 1959, pp. 34-5, 2 pages. Tricks presented are: A method of producing a line screen effect with a normal cross line screen by using a slit diaphragm; halftones using fine mesh window screen material; duotones; textured tint blocks. 2 illustrations.

SOME TIPS ON CAMERA BACK MASKING. Edward Glauder. *Research Progress* No. 45, *Photographic Department Memo*, No. 1, Nov. 1959, 4 pages, Lithographic Technical Foundation. The method is described briefly and some characteristics, precautions and advantages given. Then follows a step-by-step procedure in some detail covering such items as register in the camera back, testing filters and lenses to assure registration of masks, the use of color patches as a check on the densities of the masks, also the use of the gray scale. Screening is discussed. Three tables give data on filters, exposures, and densities; a graph shows characteristic curves

of the masks; and an illustration shows ideal color patch relationships.

REPRODUCTION TO ACCURATE SIZE: 6-ENLARGING THE SCALE OF REFERENCE. CONCLUSION OF THE SERIES. Frank H. Smith. *Modern Lithography*, Vol. 27, No. 11, Nov. 1959, pp. 65-6, 132, 3 pages. Author first points out that greater precision and resolution is obtained with short focal length lenses than with long. The method described in this installment is one that was used in preparing accurate reticules for optical instruments and uses an enlarger type of equipment. For large scale reductions a two step procedure is described, using a vernier scale type of checking procedure. The mathematics involved is gone into in some detail. 1 illustration.

SURVEY OF COLOR SCANNERS: WHAT'S HERE; WHAT'S TO COME. J. A. V. Hyatt. *Modern Lithography*, Vol. 27, No. 11, Nov. 1959, pp. 52-4, 3 pages. From a talk presented at the 63rd annual convention, American Photoengravers Association, Dallas, Oct. 19, 1959. "It is estimated that well over \$6 million has been spent in research on color scanners by some 10 organizations." Three organizations expect to start making delivery of four different machines in early 1960. These are the Crosfield Scanatron; Hell of Germany with the Colorgraph, and the color version of the Vario-Klischograph; and Fairchild with the Scan-A-Color. These four machines, plus four others, are each discussed at some length. The others are the Time-Life Scanner which has been in use for some time and is constantly being improved; the H.P.K. Autoscanner which is in use in nine firms; the Belinograver from France which apparently is still under development; and the Miehle Color Scanner which is still in the developmental stage with no estimate of completion time. 1 illustration.

A DETAILED CHECKLIST ON HOW TO MAKE GOOD HALFTONE TINTS. Dick Arden. *Graphic Arts Monthly*, Vol. 31, No. 11, Nov. 1959, pp. 66, 68, 70, 72, 74, 5 pages. Author suggests that instead of using only good parts of tint sheets, methods are available to avoid the waste of the rest, as good tints can be made. The methods given are for use with contact screens gray or magenta. Author gives detailed instructions with detailed commentaries under the following 13 headings: 1. The screen. 2. Humidity. 3. The film. 4. Developer. 5. Manipulation in development. 6. Light sources. 7. Static electricity. 8. Newton rings. 9. Vacuum frame. 10. Open faced or camera vacuum back. 11. Halation. 12. Smoothness of underlying surfaces. 13. Washing and drying.

***PRESCREENED FILM.** K. R. Yanson. *Poligraf. Proizvodstvo*, No. 1, 1958, pp. 18-20. From *Monthly Abstract Bulletin*, Vol. 45, No. 11, Nov. 1959, p. 478. The nature and mode of use of prescreened graphic-arts materials are explained. Work on these is proceeding at the (Soviet) All-Union Research Institute for the Printing Industry. Mention is made of Kodolith

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Autoscreen Film, already in production. Processes based on the Albert effect and on the Clayden effect have been tried, and preference appears to be given to the Clayden effect as the simpler to manipulate.

A SIMPLE IMAGE REVERSER. J. T. Groet. *Bulletin for the Graphic Arts*, No. 12. (Eastman Kodak Co.). Undated, but received Dec. 7, 1959, pp. 10-1, 2 pages. Brief instructions are given for a simple device consisting of a framework to be mounted on the back of a process camera and having a front surface mirror mounted at 45° to reflect the image upward onto the sensitive material. 2 illustrations.

BOILED FILM. Anon. *Industrial Research*, Vol. 1, No. 4, Nov.-Dec. 1959, pp. 94-5, 2 pages. Slide-O-Film from Charles Beseler Co., East Orange, N. J. is a slow speed, ultraviolet sensitive film suitable for halftone or line copy work, making positive projection slides, etc. Development is by heating to 212 to 250°F. in boiling water or by other means. Some uses are suggested. A development from the older Kalfax film of Kalvar; the image is grainless and permanent. 1 illustration.

Planographic Printing Processes

PRE-SENSITIZED PLATES. By a Technical Correspondent. *The Litho-Printer* V. 1, No. 1, January 1958, pp. 8, 10 (2 pages). The advantages and disadvantages of pre-sensitized plates are discussed. A comparison of these plates vs. the usual dichromated colloid surface plate is made. The platemaking operations are considered, as is the performance on the press. The advantages and disadvantages of the grainlessness of these plates are shown. A survey of the plates available is included.

DEEP-ETCH ZINC PLATES (Conclusion). William Byers. *Graphic Arts Monthly* 31, No. 12, December 1959, pp. 110, 112, 114, 116 (4 pages). An advantage of deep-etch plates over negative and surface plates is the ability to manipulate to sharpen all or portions of a plate. Staging, development, lacquering, etc. are carried along step-by-step and explained up to the point where the plate is ready for the press.

Paper and Ink

***IMPROVED INKS FOR LITHOGRAPHIC BOOK PRODUCTION.** F. W. Stoyke. *Bk. Design & Prod.*, Vol. 2, No. 1, 1959, pp. 46-7. From *Printing Abstracts*, Vol. 14, No. 7, July 1959, Abstr. 2373. Advances in the manufacturing techniques and formulations of lithographic inks are briefly discussed.

PAPER FOR WEB OFFSET PRINTING. K. L. Wallace. *American Pressman*, Vol. 69, No. 8, Aug. 1959, pp. 25-7, 3 pages. Much has been learned by trial and error about paper for web offset, more remains to be learned. Papers used include coated and uncoated, groundwood and free sheet, glossy and dull finish, and newsprint, with basis weight from 25 to 90 lb. book basis. Present consumption is approximately 340,000 tons per year, of which approximately 74,000 tons is coated. Some qualities required are

listed as: 1. Sheet strength. 2. Water resistance in a coated sheet. 3. Paper must be free of surface dust, lint, hickies. 4. Condition of rolls more critical than for web letterpress. Use of letterpress papers on web offset is discussed. Blisters are a problem in heat-set printing, which the author considers at some length.

***POISON HAZARDS IN FOOD WRAPPERS.** G. Dunbar. *Print in Britain*, Vol. 7, No. 2, June 1959, p. 51, 1 page. From *Printing Abstracts*, Vol. 14, No. 8, Aug. 1959, Abstr. 2671. Brief notes are given on the sources of the lead, copper, zinc and barium found in printing ink pigments and their effect on health.

ADVANCES IN METAL DECORATING INKS. John W. Dyer. *American Ink Maker*, Vol. 37, No. 11, Nov. 1959, pp. 30-1, 33-4, 69, 5 pages. The functions of metal decorating are cited as: decorating, information, protection. Some history of the process is given, covering metals, presses and inks. Specific requirements of metal decorating inks are: 1. Resistance to lithographic breakdown. 2. Colors must not change in ovens nor bleed in finishing varnishes or lacquers. 3. Films must be flexible for subsequent stamping operations. 4. End use requirements must be met. 5. Must have abrasion resistance. Some recently introduced organic pigments which meet (2) are listed. Resins and varnishes which meet (3), (4), and (5) are listed and discussed. Lacquer and varnish coatings, some of which are pigmented, are discussed in relation to their requirements. Possible future trends include improved formulations, higher speeds, xerographic printing methods. Some growth statistics are quoted. 3 illustrations, 4 references.

Lithography — General

OFFSET LITHOGRAPHY INCLUDES MANY PRINTING METHODS. George M. Halpern. *Inland and American Printer and Lithographer*, Vol. 144, No. 1, Oct. 1959, pp. 80-1, 131, 3 pages. (Pressroom). A discussion of the various terms (lithography, photolithography, offset, photo-offset, offset lithography, planography) which are applied to a printing process and commonly used incorrectly. Some history is given in clarification of some of the terms, followed by some of the advantages of the process.

PRE-PRESS REGISTRATION ACHIEVED WITH ALLDIS PUNCH AND PINBOARD METHODS. Anon. *Printing Magazine*, Vol. 83, No. 11, Oct. 1959, pp. 103, 1 page. Description of a punch and pin register system developed by Harold Alldis of Palo Alto, Calif. Simple equipment and repeated infallibility are claimed.

***OFFSET DAILY BEGUN IN CITY NEAR HOUSTON.** Anon. *Editor and Publisher*, Vol. 92, No. 41, Oct. 10, 1959, p. 16B, 1 page. A brief story of the Pasadena (Tex.) Citizen which is published 5 days a week (Mon., Wed., Thurs., Fri. afternoons, Sunday mornings). The second Texas daily paper by offset, it is printed on the same Vanguard press as the other, the Arlington-Grand Prairie News Texas.

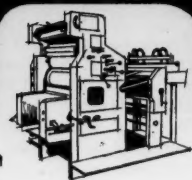
NEW WRAP-AROUND PLATE AND PRESS SPELL TROUBLE FOR LITHOGRAPHERS? Charles W. Latham. *Inland and American Printer and Lithographer*, Vol. 144, No. 2, Nov. 1959, p. 53, 1 page. In answer to a question, the author explores the reasons why letterpress printers have been going into lithography, creating combination shops. He feels that the advent of the wrap-around plate and the press for it will be good for the industry in general and anticipate that some lithographic shops will spread into letterpress via the wrap-around plate because of its inherent advantages and the similarity to lithography.

Graphic Arts — General

CUT COSTS WITH GOOD PLANT DESIGN. Charles W. Latham. *Inland and American Printer and Lithographer*, Vol. 144, No. 1, Oct. 1959, pp. 65-7, 3 pages. Good plant design for efficiency in handling work can mean real savings in time, resulting in greater savings than many other forms of economy. The careful arrangement of production departments so that work follows an orderly, logical progression is discussed and illustrated with a simplified flow diagram for a combination plant.

INVENTION WITH GREAT POSSIBILITIES. Anon. *Printing Press and Publishing News* (London), No. 211, Oct. 22, 1959, p. 4, 1 page. A brief story on a Prin Reader, developed by the U. S. Air Force and Farrington Mfg. Co., Alexandria, Va. It reads typewritten pages and translates them into electrical signals at 200 characters per second. It can read only one type face (upper and lower case and punctuation); scans a line at a time; output can be punched paper tape, punched cards, magnetic tape, or signals to feed into a computer.

***NEW METHODS, NEW MARKETS, NEW MACHINES.** Robert Downie. *Advertising Requirements*, Vol. 7, No. 10, Oct. 1959, pp. 115, 122, 2 pages. Adapted from a speech delivered before the Lithographers and Printers Natl. Assn. Author gives a rather incisive, direct-spoken analysis of the several printing processes as they now stand, together with some speculation on the future. He believes that lithography has advanced to its present position through aggressive action and research and at present has distinct advantages in certain types of printing. However, he foresees a great future for wrap-around plate letterpress, which adopts many of the advantages of lithography without its disadvantages; also in gravure when certain movements now under way bring cylinder costs down. The relation of inks, inking systems and ink drying to the whole picture are discussed. The incidence of new technical and research groups in various process areas is mentioned. Finally he points out that research has carried lithography "close to its borders of development"; also that most developments of lithographic research help other processes as well. The possibility of a major breakthrough in lithographic techniques is mentioned.★



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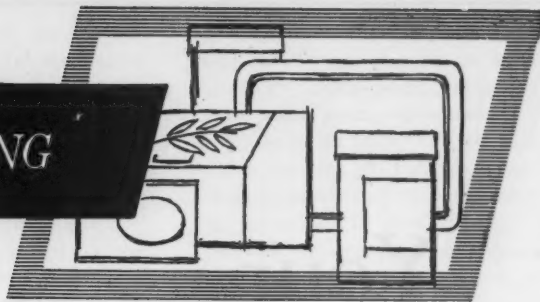
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METAL DECORATING



Burners for Metal Decorating Ovens

By *Lowell F. Crouse*
Vice President, Maxon Premix
Burner Co.

Conclusion

A SECOND type of gas burner application in a metal decorating plant is for make-up air supply systems.

Did you ever stop to think that an oven "breathes" fresh air from your plant and "exhales" to the atmosphere through the stack? The fresh air intake at each zone draws air out of the plant. This air must be replaced by air from outside the building. In warm climates this air can come through open windows and doors, but in winter in the cooler climates, it usually comes in through cracks and crevices, creating drafts, unless provision is made to admit it elsewhere.

As previously mentioned, typical ovens of the type we are talking about will require from 6,000 to 18,000 cubic feet per minute of fresh air at 70° F. Multiply this by the number of ovens in your plant, add in the amounts exhausted from hoods over coaters and other devices in the plant, and you may be surprised to learn that you are pulling in 20,000, 50,000, or even 100,000 CFM of air.

If your plant is heated in winter, this amount of air is being infiltrated—and heated—whether you realize it or not. The whole plant will be under suction from the exhaust

fans, and cold air is drawn in wherever it can get in. This can create uncomfortable working conditions in certain areas, and make the plant generally difficult and expensive to heat.

A make-up air supply system simply recognizes the need for this fresh air and provides a controlled means for delivering it into the building, filtered and heated. Where gas is available at a reasonable cost, this air can be heated most efficiently by a direct-flame application using the Airflo Line Burner which was described last month.

In a typical make-up heating system, air is pulled from outside the building, through a filter bank, across and through the line burner assembly, and delivered under pressure by a fan into the area from which air is being exhausted. The exhaust from the building and the fresh make-up air are brought approximately into balance, so that neither an excessive vacuum nor back-pressure is created in the plant.

With 100 per cent fresh air passing over the Airflo Line Burner, turn-downs of 20:1 or 25:1 are easily obtained. This means, for example, that the temperature rise in the incoming air could be, say, 90° F. (or sufficient to raise the air from 20 degrees below zero to 70° F.) and,

at the other extreme, the minimum temperature rise could be as low as 3° or 4°, so that 66° or 67° outside air could be raised to 70° F. for worker comfort.

A question which frequently arises is the suitability of *direct-firing* into air which may be used for human consumption. This usually comes as a result of confusing this with space heating. It definitely would not be practical to direct-fire space heaters, which re-circulate the air within the room or building. They are indirectly-fired through tubes, and the products of combustion must be vented to the outside.

In a make-up air system the greatly-diluted products of combustion make only one pass through the building. Remember, we are replacing air which is being exhausted from the plant.

Instead of entering through the building wall or a window, the fresh air can be brought in through the roof. The heated make-up air may just be dumped into the building, or a delivery duct system can be used to convey it to points close to the exhaust intakes.

We have discussed systems which might be built in to the plant structure. Now, let's look at some typical

From a talk presented at the 25th NMDA convention, New Orleans.

Your Balance Sheet Will Tell You!



Yes, your balance sheet will tell you whether or not you are making a profit, whether or not you are operating efficiently, or whether your production lines need careful study to bring your work-flow up-to-date.

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When thinking of Progress—think of Wagner!



Wagner Litho Machinery Division
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Secaucus, N.J.

"packaged" make-up air heaters which are available from several manufacturers. First is a 45,000 CFM unit fabricated by Metals Engineering and Manufacturing of Detroit. It comes complete with controls and ready to flange into an intake duct system.

Then there is a smaller "packaged" unit offered by Aerovent Fan Co. of Piqua, O. This is a 30,000 CFM unit, rated at 3,000,000 BTU/HR maximum input.

Fume Incineration

Now let us turn to the use of gas in fume incineration.

This is a problem with which you are all familiar. It is a complex problem with which it is difficult to come to grips. Standards vary widely—or are non-existent. Politics rears its ugly head from time to time. What has been demonstrated to work well under one set of operating conditions doesn't always do a job under other conditions.

As you are well aware, there are at least two approaches to fume elimination using gas burners: the direct-flame ignition approach and the gas preheater for a catalytic combustion bed.

Our equipment has been used satisfactorily in both ways. I cannot and will not attempt to tell you which should be used in a specific instance, but will be glad to share with you some of our experience with both.

The undesirable elements in the effluent from metal decorating ovens, as you know, are predominantly combustible. If raised to their auto-ignition temperature in the presence of oxygen, they will burn. Since these ignition temperatures are, for the most part, substantially higher than the oven exhaust temperature, help is needed in reaching them.

Of course, the simplest way would be to raise the entire mass of exhaust gases to a temperature higher than the ignition temperature of the combustibles. But this is very costly and economically unjustifiable.

The problem, then, is to use as little additional fuel as possible to raise a portion of the combustibles to the ignition temperature, then to use

the heat thus generated to raise additional combustibles to ignition temperature, and so on, a chain reaction. What makes it so difficult, of course, is that these reactions must take place in a rapidly moving stream of oven exhaust gases purposely diluted with air to a point well below the explosive or combustible range.

This intriguing and complex combustion problem has had much thought given to it. Many solutions have been tried, with results ranging all the way from abject failure to unqualified success, under some specific operating condition. Let's look at some of them which have been used with moderate to good success.

(Parenthetically, I might point out that the measure of success in the field of fume incineration, in the absence of universal standards, is usually whether or not the user has been cited for violation of the air pollution regulations. In most areas there is no such thing as an "approved" installation on which the authorities will put their thumbprint in advance. Also, the air pollution engineering board and the enforcement arm are often entirely separate organizations).

A very simple direct-flame approach was developed about ten years ago. The idea was based upon discharging a high-velocity gas flame counter to the flow of oven effluent, then deflecting it into multiple forks or tongues of flame through which the combustibles would pass. This did a pretty good job of knocking out the solids which create smoke and "fall-out", but allowed many of the lighter, volatile elements to pass through. There just wasn't time enough to start the chain reaction previously mentioned. Yet, some of these so-called "fume burners" still are in operation without citation of violation. In other instances they are still in use after the addition of catalyst units.

Still another approach used a circular-faced or "fish-tail" burner throwing a fan-shaped flame pattern across the duct. This has met the need of one can company in two widely-separated cities, again based on the criterion of no citation for violation. Yet, I have seen a test re-

port from an independent laboratory on such an installation which indicated that it was possible to have operating conditions in which the burner added to the concentration of aldehydes in the stack. And, because of their pungent, eye-watering odors, aldehydes are among the least desirable ingredients of oven effluent.

Very-recent attempts to use direct-flame ignition without catalyst have included two West Coast installations of the Maxon Airflo Burner. Because the Airflo Line Burner works well in air streams of high velocity—2000 to 3000 FPM—it is possible to bring the flame into very close contact with the oven effluent. Most of it actually passes through the openings in the stainless steel mixing plates, and the remainder goes immediately past the edges.

The theory behind this arrangement is that the gas-rich mixture produced within the burner system mixes with the air-rich oven effluent at each opening in the mixing plates, thus creating at the edges of these openings a combustible air-gas-effluent mixture, which will burn there to raise the remainder to ignition temperature.

Early reports have been very encouraging, but sufficient time in service has not elapsed to permit really definite conclusions. Again, all we can report is that no objections have been made by the authorities to the results produced.

One test oven is equipped with explosimeter control, and the oven exhaust is regulated to one-fourth LEL—well below the lower explosive range. At this rate of fresh air make-up, the oven effluent is said to contain about 13 B.t.u. per cubic foot. Approximately 35 gallons per hour of solvents are evaporated in this oven.

Temperature of oven exhaust varies from 250° to 450° F., depending upon the work being handled. The function of the burner is to raise this to approximately 600° F. as it enters the catalyst. Combustion of fumes in the catalyst raises the temperature to approximately 1000° F. as the gases are discharged to the atmosphere. The burner firing rate is usually controlled to maintain a minimum of 600° F.

inlet temperature to the catalyst and a maximum of 1000° F. down-stream of the catalyst.

Function of Catalyst

Perhaps we should review briefly the function of the catalyst:

By definition, a catalyst accelerates a reaction without becoming a part of the reaction. In one installation, made by Catalytic Combustion Corp., the catalytic elements are all-metal units with an external appearance similar to a metallic air filter. The

manufacturer describes the construction in these words:

"High nickel alloy screens on both faces enclose a sewn mat of crimped high nickel alloy ribbon. The ribbons are on the order of 1/16" wide x .005" thick, are crimped and compressed before the mat is sewn together. The mat is electro-plated with precious metals, and conditioned for activity."

Passing combustibles and air across the surfaces of the ribbons causes combustion to occur at much lower

ignition temperatures than is possible without the catalyst.

While catalytic fume incinerators are not inexpensive, they have often proved to be a satisfactory answer.

Unfortunately, there is no "patent medicine" which may be prescribed for industrial fume incineration. Direct-flame methods may be used in some instances with satisfactory results at low initial cost. In other instances, the extra for a catalytic unit with gas preheater is more than justified by the results produced.★

Stolk Named Chairman

William C. Stolk last month was named chairman and chief executive officer of American Can Co. Mr. Stolk had been president of the company since 1951, and chief executive officer since 1952. The office of chairman had been vacant since the retirement in 1952 of C. H. Black.

Roy J. Sund was named to succeed Mr. Stolk as president of the company at a meeting of the board. A director, Mr. Sund was formerly a vice president of the company and general manager of the Marathon division, which produces paper packaging materials.

Mr. Sund and William F. May also were elected to the executive committee of the company. Donald A. Snyder succeeds Mr. Sund as vice presi-

dent and general manager of the Marathon division. He had been assistant general manager.

New Extrusion Press

Aluminum cans can be produced at the rate of 120 cans a minute on a new Bliss high-speed extrusion press installed at Aluminum International. According to the company, the speed is twice that attainable with older equipment.

Combined with a continuous strip-casting method developed by Aluminum International, the process now is competitive with conventional three-piece steel cans. Higher production speed of the new machine results from a redesigned press drive, it is reported.

Can bodies are made from 1/8-in. slugs of aluminum which is 2 1/2 in. in diameter. Walls of the extruded can are .010 in. while the can itself is 5 1/2" tall.

Minute Maid Tests Aluminum

A test run of aluminum cans for frozen fruit juice concentrate was made last month by Minute Maid Corp., Orlando, Fla. The company completed a three-week test run of 6,500,000 aluminum cans for orange juice, utilizing portable can-making equipment in conjunction with its regular filling line.

On a national basis, Minute Maid is introducing newly designed cans for its 13 different citrus products. The company's cartons also carry the new design.

The Auburndale experiment used three-piece, pre-lithographed, and pre-cut six-ounce components in pallet loads. The can assembly unit operated at a rate of 400 cans a minute while the filling lines were operated at the same speed.

The company says its aluminum cans are competitively priced with comparable tinplate, and so represent a big saving in freight costs. The experimental run used .008 gauge aluminum for bodies, and .009 for the ends. Weight of the cans is one-third that of tinplate containers.

Can components and assembly units were supplied by Reynolds Metals Co.

Facts on Next NMDA Convention

- 26th annual convention of the National Metal Decorators Association, Inc.
- Shoreham Hotel, Washington, D. C.
- October 17-19, 1960.
- Convention Committee: William A. Westphal, chairman; Robert L. Singley, Frank J. Campbell, H. S. Van Vleet, George R. Frank, George Kauffman, George LaFlam, Harold W. Lee and J. G. Smith.

PHOTOGRAPHIC CLINIC

By Herbert P. Paschel
Graphic Arts Consultant



What Is Physical Development?

Physical Development

Q: What is physical development? Has it any application in the graphic arts?

L.A.B., PHILADELPHIA

A: Physical development is a method of creating a silver density by depositing silver from a solution to a latent (exposed, but not developed) image. This is quite different from conventional processing in which the developer creates a silver image by reducing the exposed silver halide crystals present in the emulsion. A physical developer is quite similar to the silvering solution used in making mirrors.

In a modified form physical development has been used in the graphic arts as a means for restoring density to halftone dots that have become gray from excessive dot-etching. But, with improvements in halftone films and plates, particularly in their ability to retain adequate density with dot-etching, the need for intensification by means of physical development waned.

Separation Techniques

Q: Are there any major differences in separation techniques between negative and positive color transparencies?

L.P., LYNBROOK, N.Y.

A: In view of the differences in characteristics among the various

It is impossible for Mr. Paschel to give personal replies by mail, but all questions will be answered in this column as soon after receipt as possible. The columnist also is available to the trade as a consultant for more complex litho problems.

brands of color negative film, no specific details can be given as to working procedure. In general however, a slightly more contrasty panchromatic film or plate is used for recording color negative separations than for positive color films. This is to offset the inherently lower contrast of color negative films, which is lowered even further if masking is employed. Narrow cut filters are largely recommended for separating negative color films. In some cases it may be desirable to use a panchromatic recording material with a high red sensitivity.

The differences between the two systems are those necessitated by the differences in dye absorption and contrast. Otherwise the same rules apply.

What Is Raycolor?

Q: I recently came across the name Raycolor in a photographic magazine. Can you tell me what this is?

C.B., ROCHESTER

A: Raycolor is the trade name of a color negative film and a tripack paper print material produced by Raycolor Ltd., Surrey, England.

Book Reviews

COLOUR IN INDUSTRY TODAY, Robert F. Wilson. The Macmillan Company, 60 Fifth Ave., New York 11, N. Y. 7½"x10" 90 pp., \$8.

The human response to color, as we all soon learn, has many ramifications. Color can soothe or irritate; stimulate or depress; attract or repel; please or displease; lull us into a feeling of contentment or inspire fear. Obviously, the emotional response to color has much to do with our everyday attitudes. If properly used, color can raise human efficiency, ability and well-being.

Mr. Wilson's book contains the accumulated knowledge and experience of a man who devoted the better part of his career to the study and practical application of color in all spheres of life. After outlining the fundamentals of color, color vision and color psychology, the author proceeds to discuss the intelligent use of color for safety, visibility and legibility; color preferences and the like.

The bulk of the text is of direct interest and use in industry. The information about color preferences, for example, can be applied to advertising, packaging, decoration of offices and workrooms, etc. Levels and type of illumination in workrooms for maximum efficiency are

discussed in detail and give pertinent clues on how to insure worker output at maximum rates. The information regarding color coding of machinery and machinery parts will pay off in greater workroom safety.

THE BRITISH JOURNAL PHOTOGRAPHIC ALMANAC, 1960. Editor: Arthur J. Dalladay. Amphoto, 33 West 60th St., New York 23, N. Y. 620 pp. (32-page pictorial supplement), \$2.50 board, \$3. cloth bound.

This is the 101st edition of a famous publication which not only reviews current trends in photographic materials and methods but serves as a reference source for a wide variety of facts. The present issue, for example, provides up-to-the minute details on available color films, flash technique, new products, etc. At the same time it devotes 10 pages to the properties of the chemicals commonly used in photography

and 11 pages to a list of textbooks on photographic history, technique and applications, plus many pages of weights and measures, optical calculations, and the like. This blending of the old and the new makes each issue of the BJ Almanac both timely and timeless.

Joseph S. Mertle

Through his writing, research and lectures, Joseph S. Mertle contributed much to technological progress in our industry. Because of him, several generations of craftsmen have a better understanding of their craft.

His death, on April 30, takes from the graphic arts scene a colorful and dominant figure who, through talent and experience, knew the history and technology of the graphic arts better than any other individual. To those who were privileged to know him, his passing is a deep personal loss.

It is indeed fortunate that his work is left with us in the scores of books and articles he authored. With his pen, Joseph S. Mertle not only created an enduring memorial to himself but left a heritage of knowledge that will long continue to be a help and inspiration to graphic arts technicians.★

Will Teach Litho in Japan

For one year, starting in July, Arthur Flory, a graphic arts instructor at Temple University's Stella Elkins Tyler School of Fine Arts, Philadelphia, will teach lithography in Japan.

Mr. Flory has received a \$13,500 grant from the Japan Society, Inc., of New York, through the Rockefeller Foundation, for this special mission to the Orient.

His mission, as outlined by the foundation, is "to open a teaching studio in lithography in Japan and to become acquainted with Japanese print makers."

Jorgenson & Co., San Francisco letterpress and lithography firm, has added a new Miehle 29 offset press and a used two-color 42" x 58" Harris offset press.

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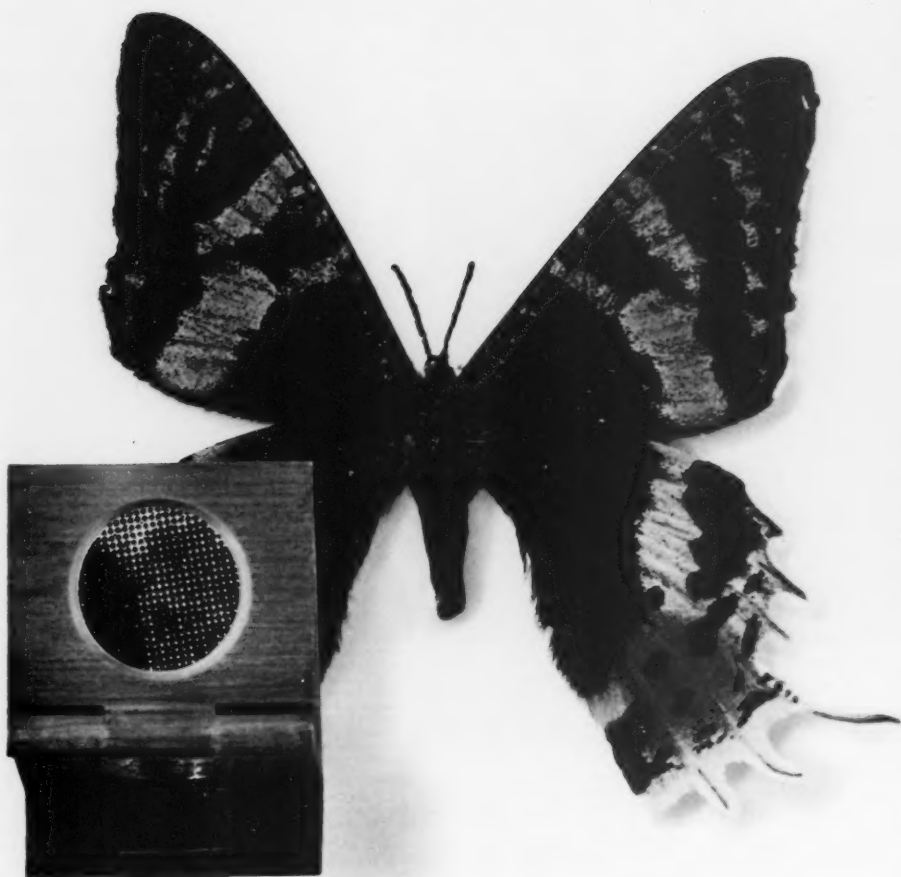
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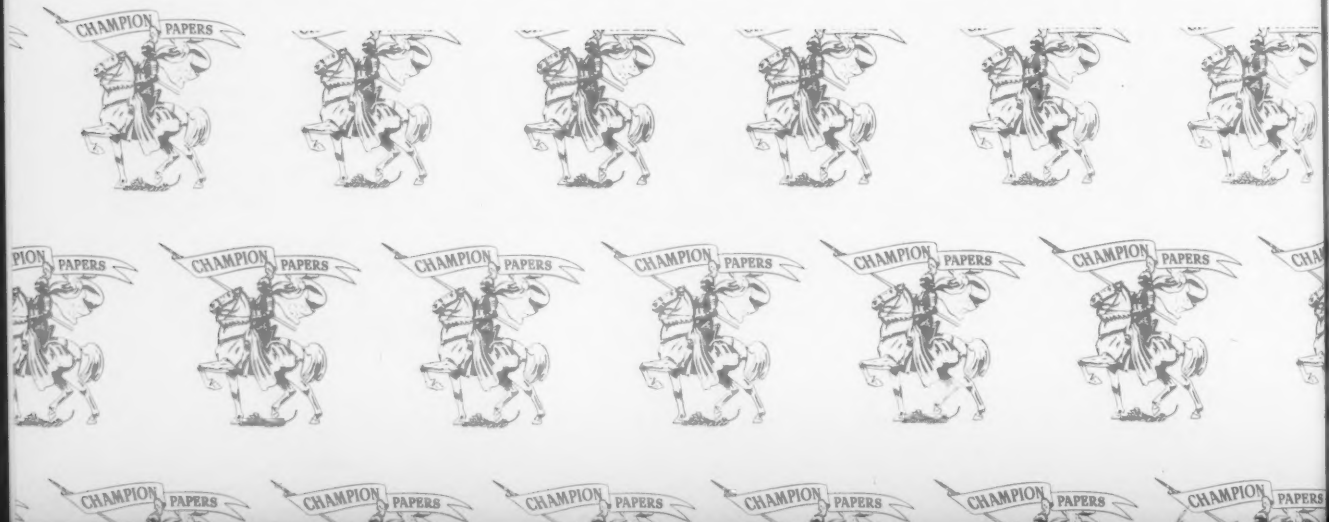
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Birmingham	The Whitaker Paper Company	Baltimore	Garrett-Buchanan Company	Oklahoma City	Carpenter Paper Company
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ARIZONA		MASSACHUSETTS			Taylor Paper Company
Phoenix	Blake, Moffitt & Towne	Boston	John Carter & Company, Inc.	OREGON	
	Butler Paper Company	Springfield	John Carter & Company, Inc.	Portland	Blake, Moffitt & Towne
Tucson	Blake, Moffitt & Towne	Worcester	John Carter & Company, Inc.		Carter, Rice & Co.
ARKANSAS		MICHIGAN		(Division of Carpenter Paper Company)	
Little Rock	Roach Paper Company	Detroit	The Whitaker Paper Company	PENNSYLVANIA	
		Grand Rapids	Central Michigan Paper Co.	Allentown	Kemmerer Paper Company
CALIFORNIA					(Division of Garrett-Buchanan Company)
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Los Angeles	Carpenter Paper Company	St. Paul	C. J. Duffey Paper Company	Philadelphia	Garrett-Buchanan Company
Oakland	Blake, Moffitt & Towne		Inter-City Paper Company		Paper Merchants, Inc.
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Denver	Graham Paper Company		Wertgame Paper Company	SOUTH CAROLINA	
CONNECTICUT		St. Louis	Acme Paper Company	Columbia	Epes-Fitzgerald Paper Company
Hartford	John Carter & Co., Inc.		Shaughnessy-Knop-Hawe Paper Company	SOUTH DAKOTA	
New Haven	John Carter & Co., Inc.	MONTANA		Sioux Falls	Sioux Falls Paper Company
DELAWARE		Billings	Carpenter Paper Company	TENNESSEE	
Wilmington	Whiting-Patterson Co., Inc.	Great Falls	Carpenter Paper Company	Chattanooga	Bond-Sanders Paper Company
DISTRICT OF COLUMBIA		Missoula	Carpenter Paper Company	Knoxville	The Cincinnati Cordage & Paper Company
Washington	The Whitaker Paper Company	NEBRASKA		Memphis	Roach Paper Company
FLORIDA		Lincoln	Carpenter Paper Company	Nashville	Taylor Paper Company
Jacksonville	The Jacksonville Paper Co.	Omaha	Carpenter Paper Company		Bond-Sanders Paper Company
Miami	The Everglade Paper Company	NEW HAMPSHIRE		TEXAS	
Orlando	The Central Paper Company	Concord	John Carter & Company, Inc.	Amarillo	Kerr Paper Company
Tallahassee	The Capital Paper Company	NEW JERSEY		Austin	Carpenter Paper Company
Tampa	The Tampa Paper Company	Newark	Central Paper Company	Dallas	Carpenter Paper Company
GEORGIA		Trenton	Central Paper Company	El Paso	Olmsted-Kirk Company
Atlanta	The Whitaker Paper Company	NEW MEXICO		El Paso	Carpenter Paper Company
Macon	The Macon Paper Company	Albuquerque	Carpenter Paper Company	El Paso	Carpenter Paper Company
Savannah	The Atlantic Paper Company	NEW YORK		El Paso	Carpenter Paper Company
IDAHO		Albany	Hudson Valley Paper Co.	El Paso	Carpenter Paper Company
Boise	Blake, Moffitt & Towne	Binghamton	Stephens & Company, Inc.	El Paso	Carpenter Paper Company
ILLINOIS		Buffalo	Hubbs & Howe Company	El Paso	Carpenter Paper Company
Chicago	Dwight Brothers Paper Company	Jamestown	The Millcraft Paper Company	El Paso	Carpenter Paper Company
	Parker, Schmidt & Tucker Paper Co.	New York City	Forest Paper Co., Inc.	El Paso	Carpenter Paper Company
Decatur	Decatur Paper House, Inc.		Milton Paper Co., Inc.	El Paso	Carpenter Paper Company
Peoria	Peoria Paper House, Inc.		Pohlman Paper Co., Inc.	El Paso	Carpenter Paper Company
Quincy	Irwin Paper Company		Reinhold-Gould, Inc.	El Paso	Carpenter Paper Company
Rock Island	C. J. Duffey Paper Company		Royal Paper Corporation	El Paso	Carpenter Paper Company
INDIANA			The Whitaker Paper Company	El Paso	Carpenter Paper Company
Fort Wayne	The Millcraft Paper Company		Bulkeley Duntan (Far East)	El Paso	Carpenter Paper Company
Indianapolis	Indiana Paper Company, Inc.		Bulkeley Duntan S. A.	El Paso	Carpenter Paper Company
IOWA			Champion Paper Corp., S. A.	El Paso	Carpenter Paper Company
Des Moines	Carpenter Paper Company		Champion Paper Export Corp.	El Paso	Carpenter Paper Company
Sioux City	Carpenter Paper Company		Genesee Valley Paper Company	El Paso	Carpenter Paper Company
KANSAS		NORTH CAROLINA		El Paso	Carpenter Paper Company
Topeka	Carpenter Paper Company	Asheville	Hanley Paper Company	El Paso	Carpenter Paper Company
Wichita	Southwest Paper Company	Charlotte	The Charlotte Paper Company	El Paso	Carpenter Paper Company
KENTUCKY		Raleigh	Epes-Fitzgerald Paper Company	El Paso	Carpenter Paper Company
Louisville	The Rowland Paper Company, Inc.	OHIO		El Paso	Carpenter Paper Company
LOUISIANA		Akron	The Millcraft Paper Company	El Paso	Carpenter Paper Company
New Orleans	The D & W Paper Co., Inc.	Cincinnati	The Cincinnati Cordage & Paper Company	El Paso	Carpenter Paper Company
MAINE			The Whitaker Paper Company	El Paso	Carpenter Paper Company
Augusta	John Carter & Company, Inc.	Cleveland	The Millcraft Paper Company	El Paso	Carpenter Paper Company
		Columbus	Sterling Paper Company	El Paso	Carpenter Paper Company
		Dayton	The Cincinnati Cordage & Paper Co.	El Paso	Carpenter Paper Company
		Mansfield	Sterling Paper Company	El Paso	Carpenter Paper Company
		Toledo	The Millcraft Paper Company	El Paso	Carpenter Paper Company

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"The Pier" Painting on loan from the artist, Francis Chapin, Chicago

As the artist sees it...

Capturing the evanescence of color... the brilliant interplay of light and shadow... forcefully and faithfully... is just one of the new frontiers that is being reached and conquered by today's fine printing and lithography.

Today "loss in reproduction" is being pared to the minimum. The world expects miracles from our great, proficient high speed presses. Reproducing such great works of art as this watercolor by Chicago's world famous artist, Francis Chapin is... or can be... all in a day's work.

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This is BECKETT HI-WHITE, Smooth Vellum finish, 100 lb.
Color illustration courtesy of Roux Laboratories, Inc.

LITHO CLUB NEWS

Review Newly Developed Litho Aids

SIX of the newer production aids for the litho shop came under scrutiny at the June 22, meeting of the New York Litho Club. The meeting, the last until October, was attended by 160 members.

Representing their companies in the discussion and demonstrations were: Michael Canale, Canale Chemical Co., New York; Edward Murphy Roberts and Porter Co., New York; Robert Miller, Dewey and Almy Co., Cambridge, Mass.; Martin Hollander, Anchor Chemical Co., New York; James Fox, Minnesota Mining and Manufacturing Co.; Harold Gegenheimer, Gegenheimer Co., New York; and James Anastasia, Eastman Kodak Stores, Inc., New York.

Mr. Canale reviewed the Gevacopy rapid aluminum plate, which he said, is especially adaptable to transferring enlarged, reduced or same size originals to offset printing plates. The transfer process, from original to finished plate, reportedly takes less than two minutes. (See ML Nov. p. 146.)

Messrs. Murphy and Miller reported on the new polifybron blanket introduced recently by the Dewey and Almy Division of Grace Chemical Co. The talk, presented by Mr. Miller and accompanied by a slide film, covered the advantages attributed to the two piece blanket.

Mr. Hollander gave a short talk on Anchor's new Repellzit, a silicon spray used to make paper and other surfaces repellent to ink and other chemicals.

Mr. Fox explained how the new subtractive surface on the 3M type "S" plate works. The main feature of the plate, according to him, is its long run characteristics. He said that the plate can generally be expected to run about three times as long as a conventional plate.

Mr. Gegenheimer presented a slide film about the Paris exposition and the presses exhibited there. In particular he discussed a new French four color press which incorporates a new dampening system. The system consists of brush roller in the fountain, which has no cover at all, and which supplies solution directly to the dampening rollers. The flow is controlled by water stops mounted on the fountain. The brush roller is run by an independent variable speed motor.

Mr. Anastasia described the Kodak Ektalith system for making offset papers masters for short run duplicating. (See ML Nov. 140.)

The talks were followed by a demonstration period in which each speaker showed how his product worked.

New members of the club are Robert Farina, Richard Stuve and George Hoffman.

The club's annual beefsteak picnic will be held Sept. 17, at Platte Deutsche Park, Franklin Park, N. Y. Louis J. Federmack, 41 Salem Rd., North Marrexick, N. Y. is handling reservations.

Shreveport

Discuss 'Political Heritage'

Ralph Henderson, executive vice president and general manager of the Shreveport Chamber of Commerce, spoke on "Our Political Heritage" at the June meeting of the Shreveport Litho Club.

Mr. Henderson pointed out the factors which have contributed to the development of our political system, and how these factors and present changes can serve to strengthen and extend it.

Washington

Review TAGA Papers

A special meeting of the Washington Litho Club, held June 21 at the Sheraton Park heard six panelists give digested versions of the papers presented at the TAGA meeting held in Washington, June 19 to 21.

Ray Geegh, president of the litho club, pointed out that this was an attempt to bring the highly technical reports down to a level where they could be better understood and used by the average shop.

The speakers, each of whom presented three or four papers, were William T. Reid, technical director of the Battelle Memorial Institute; Dr. Albert Zettlemoyer, director of the National Printing Ink Research Institute; Joseph McSweeney, president of Mid-Cities Litho Service, Inc.; Albert Materazzi, research coordinator of Litho Chemical and Supply Co.; Michael Bruno, research director of LTF; and Marvin Rogers, graphic arts consultant.

Philip Tobias, president of TAGA, was chairman of the panel.

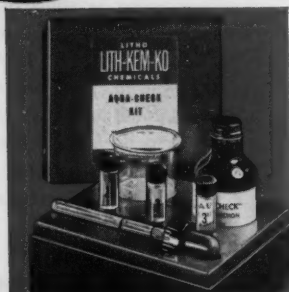
Cincinnati

3M Night Held

Six technicians of the Minnesota Mining & Manufacturing Co. discussed various company products at a dinner meeting of the Cincinnati Litho Club on June 14. The program, illustrated with slides, was presented by Robert Alexander, printing products sales supervisor. The subjects and those who discussed them were: "3M Family of Fine Plates," by C. R. Bell and Carl Etter; "3M Brand Tympan and Makeready," by W. L. O'Dell, and "Scotch Brand Tapes for Packaging and Stripping," by J. O. Bauer and R. J. Toepfer. The talks were followed by a round-table discussion.

The next regular club meeting is scheduled for Sept. 13, with monthly sessions of the Board of Directors being held in July and August. The club's annual family picnic will be enjoyed on Aug. 6 at Laumann's Grove.

5 NEW RECRUITS TO THE LITH-KEM-KO LINE REPORTING FOR DUTY!



"AQUA-CHECK" DETECTION KIT #3012: A simple, fast and accurate method to determine the amount of water in alcohol used for washing deep etch plates. Kit contains necessary glassware, chemical reagent and test samples for 60 tests. Platemakers no longer need expensive chemical equipment and long drawn out testing periods to learn if the alcohol they are using is suitable. The kit is attractively boxed and extra reagent is available when needed.

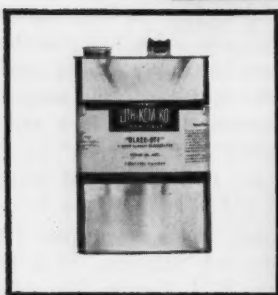
ALL 5 OF
THESE NEW
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PRODUCTS HAVE BEEN
FIELD TESTED AND
LABORATORY
APPROVED



RUB-UP INK #2401: A new formulation to meet the requirements of today's lithographic techniques. Its value is in the original rub-up of any type plate and for "rejuvenation" of plates during press runs. Also an aid to protection of a plate when stored. LITH-KEM-KO RUB-UP INK will never glaze or dry, can be washed out easily; it's picked up quickly by the image, keeps it ready for quick pick up on press. Conveniently packaged in one pound tubes or 5 pound cans.



"INK-DRI" #2499: A new press water fountain solution additive to speed up drying of press ink. A helpful chemical when it is necessary to back up a sheet immediately after running the first side. INK-DRI is also helpful when a job must be cut, folded or bound as soon as the press run is finished. It is added in small amounts to ready-to-use fountain solution. Has an indefinite shelf life, so can be on hand when needed in a hurry. Available in quarts and gallons.



"GLAZE-OFF" #8003: A brand new chemical to rejuvenate blankets. Its prime use is to remove the glaze built up by ink film or by oxidation of the rubber. Normal solvents do not remove this glaze completely, but new LITH-KEM-KO GLAZE-OFF is 100% effective. The blanket can be left on the cylinder when GLAZE-OFF is used.

It can be mixed with LITH-KEM-KO PRESS WASH #8007 for a better job and complete cleaning job. Available in quarts, gallons and 5 gallon drums.



LITHO PRESS WASH #8007: This new press wash uses modern chemical solvents to quickly and completely dissolve and remove ink films from press rollers and blankets. Easy and economical to use; will not deteriorate rubber or synthetic rollers; it's safe too, since it is not flammable. Available in single gallons and 5, 30, and 54 gallon drums.

LITHO CHEMICAL & SUPPLY CO., Inc.

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Hold Bowling Party

Departing from the custom of a spring moonlight boatride on the Ohio River, members and guests of the Cincinnati Litho Club held a bowling party on June 11. Arrangements are in charge of Joseph Hoffer of the Gibson & Perin Co., chairman of the bowling committee.

Travel films provided entertainment for the club's monthly meeting in May.

New members introduced at the meeting were Howard E. Runk and William Kelly.



Earl Jeppson demonstrates plate wear at Twin City meeting.

Twin City

Tour American Can Plant

Members of the Twin City Litho Club toured the plant of American Can Co., St. Paul, as the educational feature of the July meeting. The tour covered the various aspects in the production of metal containers and in particular the metal decorating operations of the company.

The June meeting of the club con-

sisted of the last panel presentation, in a series of three, this month's topic being—plates. The areas of this topic covered were types of metals used, types of surfaces, coatings, pre-sensitized and in-plant sensitized plates, positive and negative acting plates, plate correcting, plate repairing, processing steps, press life, and storage and rerun possibilities.

Members of the panel were R. Marshall, Photomatic, Inc.; Earl Jeppson, Brown and Bigelow; Frank

(Continued on Page 119)

S. W. Clinic Features Six Tech. Sessions

TWO days of technical sessions highlighted the three day, 10th Annual Southwest Litho Clinic, held in Houston, Texas, under the auspices of the Dallas and Houston Litho Clubs. Running from June 24 to 26, the clinic featured a trade fair of exhibits by 33 leading graphic arts equipment suppliers.

The first day of the clinic was taken up with registration and the opening of the exhibit.

June 25 saw the opening of the technical sessions, which ran from 8:15 in the morning until 3:30 in the afternoon. The topics of the six separate sessions were Small Press, Large Press, Camera, Platemaking, Stripping and Copy Preparation.

On the evening of June 25 the banquet and dance which were the main social functions of the clinic were held.

The morning of June 26 featured a general session on magnetic check

printing followed by a question and answer period.

The speakers at the clinic and their topics, were: M. G. Anderson, Ansco Division General Aniline and Film Corp., Quality Control; Paul Braman, Eastman Kodak Co., Camera; Charles Ferrin, Eastman Kodak Co., Camera; William Gatlin, DuPont Co., Color and Two Stage Masking; Donald Kenyon, Eastman Kodak Co., Copy Preparation; Michael Racchia, Sinclair and Valentine Co., Magnetic Inks; Chester Woods, S. D. Warren Co., Non-metallic Plates; Dorsey Biggs, American Type Founders Co., Phototypesetting; J. G. Bresnahan, Para-Tone, Inc., Copy Preparation; J. Ray Freese, Western Litho Plate and Supply Co., Wipe-On Plates; Cal D. Harman, Lithoplate, Inc., Presensitized Plates; Robert Meason, International Business Machines, Automation in Banks; and Allan Schreiner, Kemart Corp., Copy Preparation by Fluorescent Media.

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Robert Press

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Vincent Aliberte, 2010 Revere Beach Pkway, Everett

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Flash-O-Graph concentrated liquid Fixer is now available in the new 5 gallon Cubitainers. For plant operations requiring larger packings than the standard 1-gallon bottles this will be welcome news.

And Flash-O-Graph Hardener is now being packed in cartons of four 120 oz. poly bottles. This permits you to order Flash-O-Graph Fixer and Hardener in the sizes most convenient and economical for your needs. At the same time it gives you full freedom according to your job requirements.

NEW!... COLOR GUARD® Stop Bath

To extend the life of your Flash-O-Graph fixing baths and gain the utmost economy Hunt introduces Color Guard... a concentrated indicating acid stop bath in 1 quart poly bottles.

Normally yellow, Color Guard turns blue when exhausted. This indicator makes it easy to see when Stop Bath no longer guards against fixer exhaustion and staining; helps to extend the life of your fixing bath, prevent stains and uneven development. Order now.

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NEWS about the TRADE

Zabel, Ketterlinus Planning Merger

TWO of Philadelphia's biggest and oldest lithographic firms late last month announced preliminary plans for a merger. Employees of Zabel Bros. Co., and Ketterlinus Lithographic Mfg. Co., of nearby Primos, Pa., were informed that the firms were working out the details of a merger.

Information on the financial aspects of the move were not available at presstime. It was presumed that the two firms would operate their separate plants in much the same way as in the past.

Zabel Bros. is celebrating its 75th anniversary this year, and Ketterlinus, at 118, is believed to be one of the three or four oldest lithographic companies in the United States. Both employ several hundred persons, with

Zabel doing a general line of commercial work and Ketterlinus specializing in display, creative material and calendars. Ketterlinus owns a subsidiary, Lockwood Folding Box Co., of Norristown, Pa.

The merger, which was expected to be consummated by mid-July, would mean that the combined firms would gross about \$8 million a year. Zabel is headed by William E. Zabel, Sr. as president and chairman of the board. William E. Zabel, Jr., president of the Lithographers and Printers National Association, is treasurer.

J. Louis Landenberger, another prominent industry leader, is president of Ketterlinus, with George McGinley as treasurer and chairman of the board.

unity. It also called for local unions to petition their Internationals to work toward unity.

The conference also passed a resolution setting up a temporary committee to "consult and advise in any emergency and to formulate a program of assistance for any local union confronted with a strike situation." Ivan T. Brandenburg, president of Local 17, was named to this committee and also served on the resolution screening committee.

Other resolutions passed by the conference supported the unions involved in the current Portland, Ore., newspaper strike; called for California legislation against importing strike breakers; and urged a meeting of representatives of all local graphic arts and allied unions with presidents of the International Allied Trades unions when they meet in San Francisco next October.

ALA, Other California Unions Seek Unity

LOCAL 17 of Amalgamated Lithographers of America has indicated its interest in the union unity movement by participating in a recent printing unions conference, held at Retail Clerks' Hall in San Francisco. The meeting drew approximately sixty representatives of Northern California printing and allied trades unions (plus about fifteen visitors). All but three of the locals represented—the Amalgamated Lithographers, the Teamster-affiliated Newspaper & Periodical Drivers, and the Newspaper Guild—are members of the Allied Printing Trades Association. The representatives attending were not official delegates of their

unions, but all apparently had tacit approval of local officials.

The meeting, formally titled the Northern California Conference of Printing Crafts and Allied Unions, was initiated by John Laskey, president of the San Francisco-Oakland Photo Engravers Union, who presided. Mr. Laskey explained that the idea had been inspired by the December 1958 cooperation agreement between the Northern California ALA, Local 17, and the San Francisco Typographical union. Mr. Laskey introduced, and the Conference passed, a resolution for cooperation among Northern California unions in matters of legislation, jurisdiction, and

Schonberg Printing Sold

The forty-eight-year-old Schonberg Printing Co., Cleveland, has been purchased by two Cleveland printing salesmen, Oliver F. Emerson II, sales manager for Tower Press, and Robert L. Wing, a salesman for Buehler Printcraft Corp. and Steingass Lithograph, Inc.

Mr. Emerson is president and treasurer of the company and Mr. Wing is sales manager. The company is now called Emerson Press, Inc.

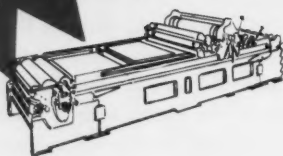
Charles F. Bittrich

Charles F. Bittrich, 81, former pressroom superintendent with Rand McNally & Co., died May 30. He had retired in 1946 after 54 years with the Skokie, Ill., printing firm.

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Now, every lithographer can have the advantages of deep etch plus economy of time and dollars. Find out how Enco Pre-sensitized Aluminum Positive Plates can help you by working directly from positives.

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ENCO ALSO MAKES NEGATIVE ALUMINUM AND THE
FAMOUS PACEMASTER ACETATE PRE-SENSITIZED PLATES

NAPL Reopens Insurance Plan

The National Association of Photo-Lithographers, July 1 reopened its group life insurance plan designed for association members and their employees.

The plan, written by John Hancock Mutual Life Insurance Co., Boston, provides coverage ranging from \$1,000 to \$5,000, according to individual status in member companies and age.

Booklets, containing information on the plan, and subscription cards are available from the association at 317 West 45 St., New York.

Detroit Employers-ALA Settle

The Detroit local of the ALA has agreed to a new contract effective from June 1, 1960 to May 1, 1962. It provides for an increase of 10 cents an hour for those earning over 100 dollars a week and 8 cents an hour for those earning under 100 dollars, effective June 1. On Dec. 1, 1960, an additional increase of 5 cents an hour and 3 cents an hour will be granted on the same basis of weekly income.

The same rates of increase will take effect on June 1 and Dec. 1, 1961.

An additional 50 cents a week per employee will be put into the health and welfare fund, during the first year of the contract and 25 cents more in the second year.

The security and legal clauses of the contract parallel those in the Cincinnati and Cleveland contracts.

Kunz Joins Cliff Kelley

Ralph J. Kunz III, has been appointed lithographic coordinator at Cliff Kelley Office Service, Inc., St. Louis. Mr. Kunz, who has been employed in the graphic arts field in St. Louis for several years, will specialize in offset printing sales for the company's printing division.

Eugene Liss was appointed creative account executive. He will write advertising copy for the firm's direct mail division.

The Cliff Kelley company doubles in offset printing and employment services.

Two Merge in Tulsa

American Bond Printing and Lithographing Co., during June, was merged into the Western Bank and Office Supply Co., both of Tulsa, Okla. The two firms, whose assets are one million dollars, will be operated as a subsidiary of Wesbanco, Tulsa.

Wesbanco will continue to operate a part of its printing plant at NW 5th and Broadway, but will move much of its equipment to the American Bond plant at NW 8th and Broadway. The two companies employ 60 persons.

Vincent Messer, chairman of Wesbanco, will continue in that post. C. Edwin Gaines, former owner of American Bond, will be executive vice president and general manager of the subsidiary.

American Bond Printing and Lithographing Co. was formed in 1951 through a merger of Bond Printing Co. and American Lithographing Co.

Wesbanco was founded in 1909 by D. W. Collins and moved to its present location on NW5 and Broadway in 1957.

Richter Becomes PIT Pres.

John Richter, Blade Printing & Paper Co., Toledo, O., was installed as president of the Printing Industry of Toledo at the association's annual meeting, last month.

Other new officers are L. M. Summers, Toledo Typesetting Co., first vice president; L. J. Sears, Jr., Franklin Printing & Engraving Co., second vice president; and George Korhumel, Superior Typesetting Co., treasurer.

R.C.S. Sold in Toronto

Maclean-Hunter Publishing Co., Toronto, has completed plans for the acquisition of Rolph-Clark-Stone, Toronto printing concern. The purchase, when completed, will cost nearly \$4,000,000.

There will be no change in Rolph-Clark-Stone's operations, and it will continue to operate as an independent company. Maclean-Hunter, however, will be represented on the board of directors. Business turnover for

the two companies totals about \$40 million per year.

Rolph-Clark and its five subsidiaries located in Toronto, Montreal and the Maritimes, employ about 1,350 persons. The company turns out calendars, greeting cards, bank cheques, containers, display posters and other printing matter.

Maclean-Hunter, largest publisher of magazines and business journals in Canada, also has a large commercial printing business, mostly involv-

ing letter press printing. Rolph-Clark specializes in offset lithography.

Uarco Advances Hinman

Uarco, Inc., Chicago designers and manufacturers of business forms systems, has appointed Burton L. Hinman, Jr., as manager of engineering and research. He will be responsible for the design of business forms and for the engineering and construction of offset and other printing and processing equipment used by the firm.

How to Clean and Dry Dampener Rollers Fast!



Jomac Roller Cleaner—Cuts press downtime, increases cover life as much as 50%! Even heavily inked dampeners are quickly and easily cleaned. Wonderful for breaking in rollers—makes them round, true and lintfree.

Jomac Dampener Dryer—Rollers are dry minutes after cleaning. Color change time is greatly reduced, puts an end to press flooding. Made to fit any Jomac Roller Cleaner from 48 to 101-in. size.

You can purchase either of these units separately. But together they will pay for themselves within a year. Write for prices and full information.

Talk to the Lithographer Who Owns One

For economy and sharper reproduction, use Uni-Damp,® Seamol® and Flanol® Dampener Covers. They are lintfree and stretch tested for skin-tight fit.

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NAPL Convention Plans Announced

PRELIMINARY plans for the 28th Annual Convention and Exhibit of the National Association of Photo-Lithographers which will be held this year in The Conrad Hilton, Chicago, Illinois, Oct. 5 to 8, have been announced.

All space on the exhibit floor will be utilized by 116 exhibitors who will occupy 196 booths. The exhibits will be open each of the four days of the convention, until 9 p.m. on Wednesday and Thursday evenings.

At least two thousand five hundred guests are expected to register for the convention, and while over one thousand executives and craftsmen, representing every branch of management and production, are attending the sessions covering all phases of the industry, hundreds of others are expected to view the exhibits of equipment manufacturers and suppliers.

The officers and directors of the N.A.P.L. will meet on Wednesday morning, Oct. 5, and the convention

will be formally called to order at 2 o'clock that afternoon by Stanley R. Rinehart, president. The four days of convention sessions will include panel discussions on Finance, Quality Control, and Selling in addition to talks on Advertising, Estimating, Labor Relations, and New Equipment and Materials.

On Saturday, Oct. 8, the annual Technical Sessions, will be held. They will be co-sponsored this year by the Chicago Litho Club.

Two social events have been planned during the convention. A luncheon will be held Oct. 6. The speaker will be the well known humorist, Harry Herschfield.

On Friday evening, the convention guests and their wives will attend the annual dinner-dance and entertainment in the Grand Ballroom of the hotel.

A special ladies program is also being prepared, details of which will be announced at a later date.

been granted, bringing the paid holiday total to 11½. Furthermore, bereavement days have been extended to include mother-in-law, father-in-law, and any relative who resides with an employee.

On Oct. 17, 1960, a general increase of 5 cents per hour will be given; and on April 17, 1961, a general increase of 10 cents per hour, with an additional 5 cents for strippers. Also in April 1961, there will be an increase of 25 cents in the health and welfare contribution.

On Oct. 16, 1961, another increase of 4 cents an hour will be given.

All wage increases are in addition to the 2 cents cost-of-living increase already given under the last contract.

Elkton Paper Goes Offset

The *Cecil Whig*, Elkton, Md., published by E. Ralph Hostetter, has purchased a two unit Goss Suburban web-offset press, for delivery in August. The press will replace the flat-bed letterpress now in use, in the paper's complete change to offset.

The press will consist of two four-page units, arranged in line and floor mounted. The printing units, which are designed for blanket to blanket impression, will have a continuous ink feed system, air operated throw-off and other features.

GA Press, Planograph Merge

Graphic Arts Press and Washington Planograph Co., both of Washington, D. C. merged in June to form the enlarged Graphic Arts Press, Inc., located at 1110 Okie St., N. E. Last year the two firms moved into the present site of the merged firm.

The consolidated firms do magazine, newsletter, pamphlet and commercial printing by both offset and letterpress.

John W. Kluge is serving as chairman of the new company, which employs more than 100 persons. Ira H. Kaplan has been elected president.

Other officers of the firm are Marcus J. Austad, vice president and treasurer; Alfred R. Johnson, secretary; John S. Beckham, general manager, and Allen Kay, production manager.

Colonial Buy Black Hawk

Colonial Press, Pittsburgh, has purchased Black Hawk Press also of that city.

Francis A. Roney, president of Colonial Press, said two-shift operations will become effective at the time of consolidation of plants of the two companies.

George E. Slair, president of Black Hawk Press, will be retained in a consulting capacity. Mr. Slair was one of three men who founded the company in 1926. Harold M. Beck, another founder, will retire from his post as vice president and secretary-treasurer.

Colonial Press has been a subsidiary of Herbig & Held Printing Co. since November, 1958.

Clarkson Advances Sterne

Clarkson-Press, Inc., Buffalo, N.Y., a Graphic Controls subsidiary, has reorganized its sales department to handle expanding business in data processing forms and the introduc-

tion of a new line of data processing equipment. Bruce C. Sterne has been named vice president of marketing for the subsidiary.

Serving under Mr. Sterne, who has been with Clarkson Press since 1951, will be William S. Call, general sales manager, and two product managers, Raymond W. Dierks, equipment manager, and J. Arthur Woodward, forms manager.

Boston Employers-ALA Settle

The Boston local of the ALA and Boston Employers have settled on a new two year contract, which terminates April 15, 1962. The pact calls for a general increase of 10 cents an hour for all employees, with an additional 5 cent increase for strippers.

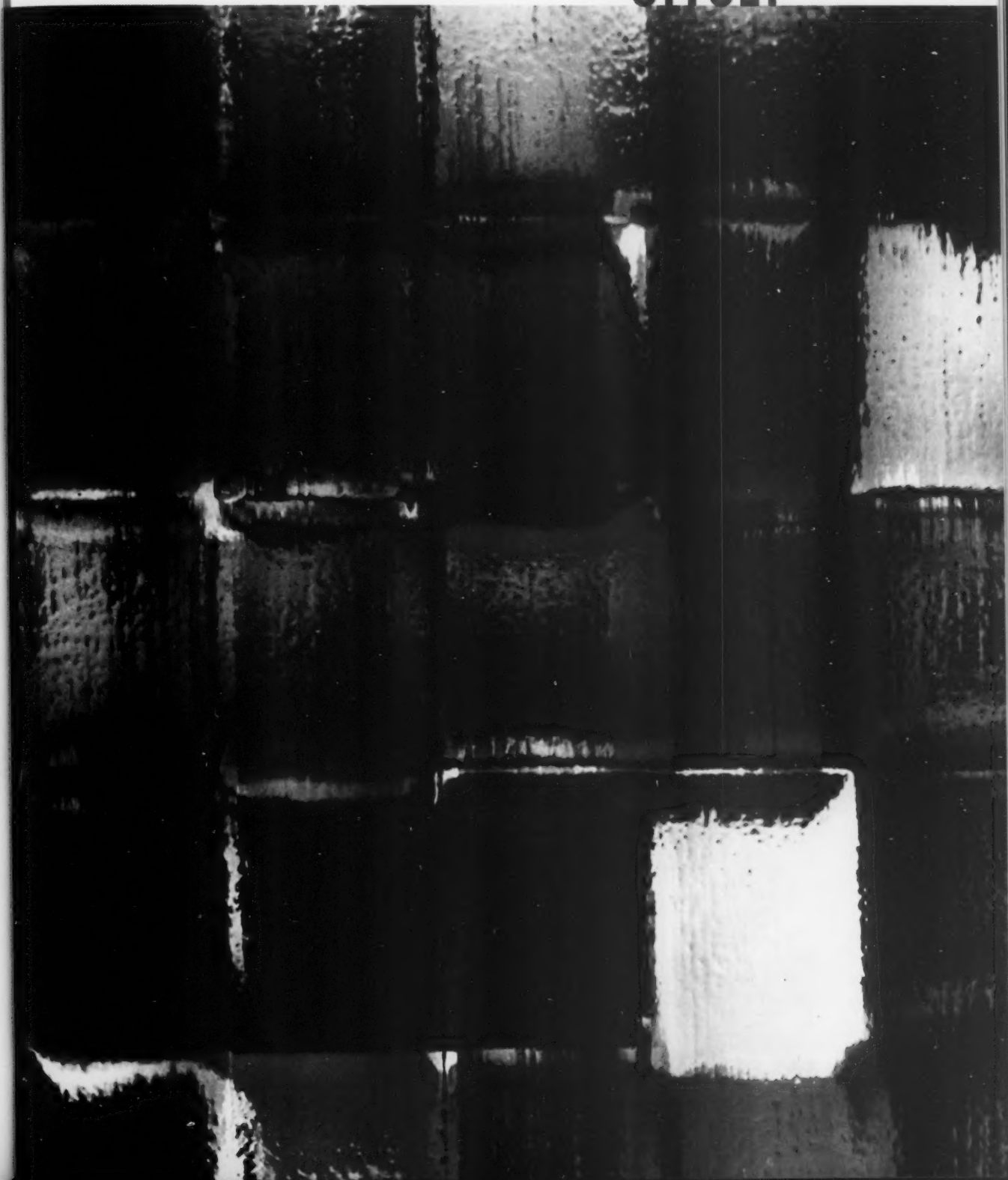
An additional contribution of 75 cents per week per employee to the health and welfare fund has been agreed upon, bringing the total per employee per week to \$3.25.

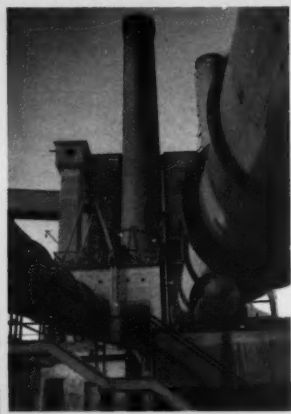
An additional one-half day holiday, the day before Christmas, has

YOU CAN SHOW YOUR TRUE COLORS ON

For greater depth in the colors you use, take advantage of Hammermill Offset's bright, luminous whiteness. Your reproductions will sparkle. So will your customers' eyes. Hammermill Offset is great for black and white, too. Turn the page and see.

HAMMERMILL OFFSET





This is Bill Richards of Cleveland. As a commercial photographer, Mr. Richards has created thousands of advertising product pictures. He's responsible also for the imaginative excursion into color photography on the front of this insert.

HAMMERMILL OFFSET REFLECTS A PRODUCT'S QUALITY

Photographers like to see their work printed on Hammermill Offset because its extremely high reflectance assures more pleasing contrasts, more faithful reproduction of colors or black and white.

Printers like to print on Hammermill Offset because colors stay on top—bright, forceful—and because Hammermill Offset stays in accurate register.

You'll like Hammermill Offset in any of the 8 finishes and 7 cheerful colors in Vellum finish. This specimen printed by offset on substance 70, Wove finish on a 25 x 38 two-color press. Sheet size 25½ x 38, eight up. Speed 4000 per hour. Colors printed yellow, blue, red, black.

Hammermill Paper Company, Erie, Pennsylvania.

TY

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70,
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SHEFTON
chukker shawl collar pullover

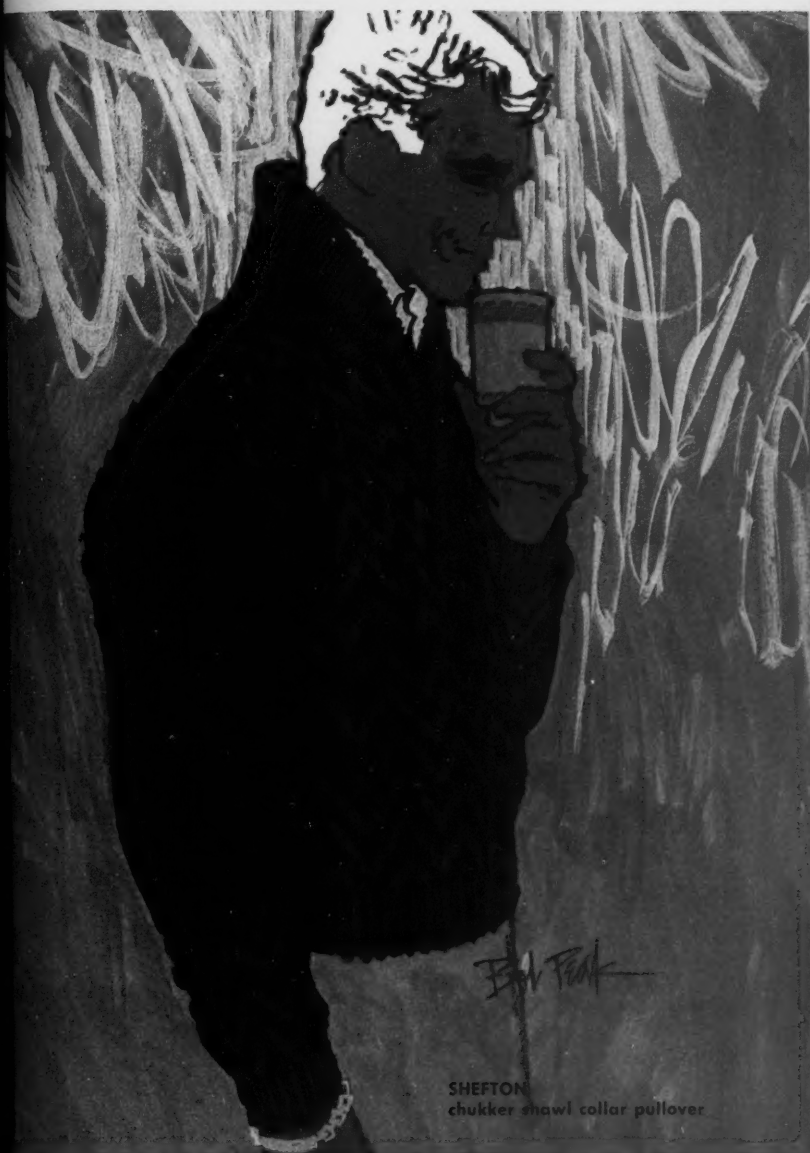
You're "10 feet tall" in bulkies of



Wool* American-Made

PURITAN SPORTSWEAR CORP.
EMPIRE STATE BUILDING, N. Y. C.

PURITAN



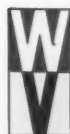
SHEFTON
chukker shawl collar pullover

You're "10 feet tall" in bulkies of

Wool American-Made *
AND MOHAIR

The Puritan Sportswear material was printed by The Du Bois Press, Rochester, N. Y. The letterpress pieces were run on a Miller TW, 21 x 28, two-color press. The offset pieces were run on a Miehle, 25 x 38, two-color offset press. 70# basis Sterling Letterpress and Sterling Offset Enamels were used.

THIS IS
STERLING
LETTERPRESS
ENAMEL



West Virginia
Pulp and Paper

TWO FOR THE SHOW

Puritan Sportswear prepared twelve inserts for Men's Wear magazine to show retailers part of their fall and winter 1960 advertising program. They chose letterpress to permit use of the same engravings for national magazines.

They also wanted counter cards, window blow-ups, etc., of the same advertisements in various sizes to complete the program. Here they converted the original letterpress engravings for offset use.

In both cases, Puritan selected the appropriate Westvaco Quality Paper . . . Sterling Letterpress Enamel and Sterling Offset Enamel.

The display blow-up on the left-hand page is our Sterling Offset Enamel; the magazine insert on the right is our Sterling Letterpress Enamel. Their bright white and gleaming surfaces give not only beautiful color reproduction but a refreshing brilliance in their own right.

For smooth, fast press runs, both of these papers give you stabilized moisture control and make close register easier to maintain. Whatever your needs, West Virginia offers an answer in its complete line of coated and uncoated papers for every process.

Write to find out about our mill-to-you-direct sales policy and technical service. West Virginia Pulp and Paper Company, 230 Park Avenue, New York 17, N. Y., or contact one of the offices listed below.

Fine Papers Division
Commercial Printing Paper Sales

Chicago 1/FR 2-7620
Cincinnati 12/RE 1-6350
Detroit 35/DI 1-5522
New York 17/MU 6-8400
Philadelphia 7/LO 8-3680
Pittsburgh 19/CO 1-6660
San Francisco 5/GA 1-5104





Printed offset on Atlantic Opacoue, Vellum finish • Boats 80



They were for your best girl. You found them growing in a vacant lot. And when you saw their bright colors, you thought: Oh, what a wonderful present!

Never in the world was there such a bouquet. Didn't she say so herself? And smother you with kisses till you nearly burst with love and pride?

Your image of love has grown more complex. But your sense of pride is still young and enthusiastic. It's what made you turn out that rush printing job in record-breaking time. A darn good job, too.

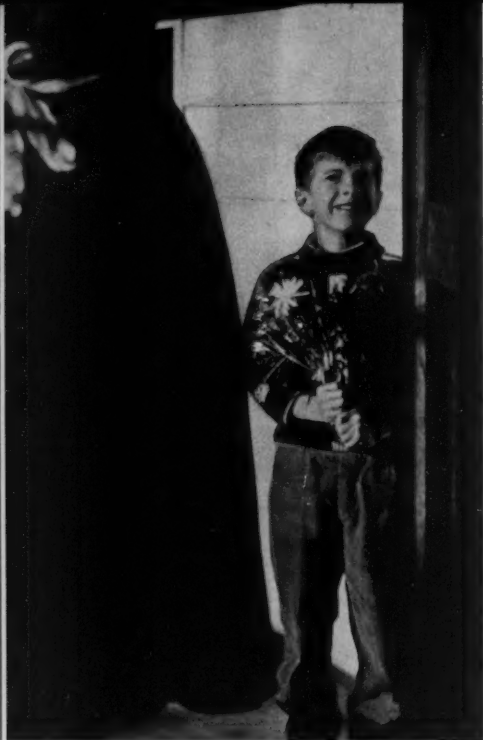
And if our good papers helped make it possible, who could blame us for feeling proud with you?



ATLANTIC FINE PAPERS

EASTERN FINE PAPER AND PULP DIVISION • STANDARD PACKAGING CORPORATION • BANGOR, ME.





Keeping one eye on quality— and the other on the budget?

Then Eastern's *Manifest* line is *your* paper. Bond, Duplicator, Mimeo, or Ledger—take your choice. *Economy priced*, yet you get high bulk, even caliper and correct moisture content in all four. This means faster, trouble-free production. Brighter, more sparkling copies, too.

Ask your Eastern Franchised Merchant for samples of Manifest Papers in white and colors. Or write us direct.



EASTERN FINE PAPERS

EASTERN FINE PAPER AND PULP DIVISION • STANDARD PACKAGING CORPORATION • BANGOR, ME.

Production facts: This insert lithographed on new, brilliant white Atlantic Opaque, Vellum finish, basis 80, on a 52 x 77 4-color press, 30 up at 4,000 IPH. Sheet size 49½ x 76¾. Color sequence was yellow, red, blue, black. Press plates were deep etch aluminum from 175-line screen positives.

EASTERN FRANCHISED MERCHANTS

ALABAMA

BIRMINGHAM
Sloan Paper Company

CONNECTICUT

BRIDGEPORT
Lott-Merlin, Inc.
EAST HARTFORD
John Carter & Co., Inc.
NEW HAVEN
Whitney-Anderson
Paper Co., Inc.
STAMFORD
Lott-Merlin, Inc.

FLORIDA

MIAMI
Coronet Paper Products Co.
Southeastern Paper & Supply Co.

GEORGIA

ATLANTA
Sloan Paper Company

ILLINOIS

CHICAGO
Dwight Brothers Paper Co.
Reliable Paper Company
Empire Paper Company

INDIANA

FORT WAYNE
The Millcraft Paper Co.
INDIANAPOLIS
Indiana Paper Co., Inc.
MacCollum Paper Co., Inc.

KENTUCKY

LOUISVILLE
The Rowland Paper Co., Inc.

LOUISIANA

NEW ORLEANS
Alco Paper Co., Inc.

MAINE

PORTLAND
C. H. Robinson Co.

MARYLAND

BALTIMORE
Garrett-Buchanan Co.
Leonard Paper Company

MASSACHUSETTS

BOSTON
John Carter & Co., Inc.
The Century Paper Co., Inc.
Von Olker-Snell Paper Co.

SPRINGFIELD
Whitney-Anderson
Paper Co., Inc.

WORCESTER

Butler-Dearden
Paper Service, Inc.

MICHIGAN

DETROIT
Chope-Stevens Paper Co.

MISSOURI

KANSAS CITY
Wertgame Paper Co.
ST. LOUIS
Shaughnessy-Kniep-Hawe
Paper Co.

SPRINGFIELD
Wertgame Paper Co.

NEW HAMPSHIRE

CONCORD
John Carter & Co., Inc.
MANCHESTER
C. H. Robinson Co.

NEW JERSEY

NEWARK
Central Paper Co.
TRENTON
Central Paper Co.

NEW YORK

ALBANY
W. H. Smith Paper Corp.
BUFFALO
Franklin-Cowan Paper Co.
JAMESTOWN
The Millcraft Paper Co.

NEW YORK

Berman Paper Corp.
Duplicating Papers, Inc.
Inter-City Paper Co.
Majestic Paper Corp.
Geo. W. Millar & Co., Inc.
Milton Paper Co., Inc.
Pohlman Paper Co., Inc.

ROCHESTER
Genesee Valley Paper Co., Inc.

NORTH CAROLINA

HICKORY
Snyder Paper Corp.
HIGH POINT
Snyder Paper Corp.
CHARLOTTE
Snyder Paper Corp.

OHIO

AKRON
The Millcraft Paper Co.

CINCINNATI

The Johnston Paper Co.
Merchants Paper Co.

CLEVELAND

The Millcraft Paper Co.
COLUMBUS
Sterling Paper Co.
MANSFIELD
Sterling Paper Co.

TOLEDO

The Millcraft Paper Co.

PENNSYLVANIA

ALLENTOWN
Kemmerer Paper Company
LANCASTER
Garrett-Buchanan Co.
PHILADELPHIA
Garrett-Buchanan Co.
Molten Paper Co.
PITTSBURGH
Darragh Paper Co.

READING
Garrett-Buchanan Co.

RHODE ISLAND

PROVIDENCE
Narragansett Paper Co.
John Carter & Co., Inc.

TENNESSEE

CHATTANOOGA
Sloan Paper Company

TEXAS

DALLAS
Olmsted-Kirk Company
FORT WORTH
Olmsted-Kirk Company
HOUSTON
L. S. Boasworth Co., Inc.
Olmsted-Kirk Company
WACO
Olmsted-Kirk Company

VIRGINIA

RICHMOND
Virginia Paper Co.
WASHINGTON, D. C.
Virginia Paper Co.

WISCONSIN

MILWAUKEE
Reliable Paper Co.
MONTREAL, P. Q., CANADA
Lauzier Paper Limited
TORONTO, ONT., CANADA
General Paper Company

Predicts 50 Per Cent Increase in N. Y.



Officers of NYEPA are (l to r) Richard Stanley, vice chairman; Harold Wolf, treasurer; Donald Thrush, chairman of the board; Anthony Perrusi, vice chairman; Jesse Lehman, secretary; and Donald Taylor, president.

ROBERT L. SORG, Sorg Printing Co., New York, predicted a 50 per cent expansion during the next ten years for the commercial printing industry in the New York metropolitan area, at the 95th anniversary meeting of the New York Employing Printers Association May 23 in the Hotel Commodore.

Mr. Sorg, chairman of the association's committee on long range goals, told 700 employers that higher printing sales would result from larger advertising expenditures, increasing per capita consumption of printed matter, and rising levels of education. He forecast printing sales of \$1,800,000,000 in the New York metropolitan area in 1970. The area had sales of \$1,160,000,000 in 1959, including commercial printing by all processes.

This optimistic outlook could be clouded, Mr. Sorg said, by wage increases unsupported by productivity gains and by failure to improve the industry's profit figure which was 2.82 per cent after taxes in 1959.

In elections held at the meeting, Donald B. Thrush, president of Thrush Press, Inc., was reelected chairman of the board. Anthony Perrusi, vice president of Advertising Agencies Service Co., and Richard P. Stanley, president of Stanley Impressions, Inc., were installed as vice chairmen of the board, having been elected previously. Jesse J. Lehman, secretary and treasurer of Georgian Press, Inc. was reelected secretary, and Harry G. Wolfe, secretary and treasurer of Davis, Delaney, Inc., was reelected treasurer.

Don H. Taylor, who continues as president and operating head of the

association, was honored on completion of 3 years as a member of the executive staff. A cake cutting ceremony marked the 95th anniversary of the association's founding in 1865 at which time it had 42 members and was known as the Typothetae of the City of New York. Thirteen former presidents and chairmen were present at the meeting and were presented with gifts in recognition of their contributions to the growth of the association to its present size of 986 member firms.

Reserve Gets Ohio State Contract

The state of Ohio has awarded a six-month contract to the Reserve Printing and Lithograph Co., Cleveland as supplier of the new state sales tax stamps. The new stamps are half their original size and will save the state about \$214,000 in printing in a one-year period.

The contract was for 505 million one-cent stamps, 463 million 2-centers, and 530 million 3-centers.

Tariff Hearings Set For July

Last month, Horace Hart, director of the Printing and Publishing Industries Division of the U. S. Department of Commerce called attention to the fact that hearings will begin July 11 on a proposal by the government to enter into multilateral tariff negotiations on items which affect printing and publishing.

A list of the products on which the United States is considering granting tariff concessions is available from the Superintendent of Documents for 40 cents. In addition to various printed

products, the list includes many items of paper and paperboard, labels, decalcomanias, pictures, calendars, maps, charts, booklets, and printing machinery (except presses).

Mr. Hart suggested that anyone interested in expressing his views on the proposals contact the Committee for Reciprocity Information.

The Printing and Publishing Division also published a list of a number of products affected and their current tariff rates. Individual items listed ranged in import value from about 300 dollars to one million dollars in 1959. Most are under \$500,000.

The concessions would be granted to those countries with whom the U. S. has reciprocal trade agreements, and certain other countries with whom we have no such agreements.

Brooks Co. Expands

The newly organized Brooks Co. has purchased the office supply division of Judson-Brooks Co. of Cleveland.

Judson Printing and the Brooks Co. consolidated nearly a year ago and have their new headquarters on Superior Ave.

Hughes Buys Curtis Way

The Hughes Corp., New York, has acquired the Curtiss Way Division of Eastern Color Printing Co. and its affiliate, the Domonel Press, Inc., located in Meriden, Conn. These two organizations produce newsstand publications and long-run commercial printing by both letterpress and web offset.

Eastern Color Printing Co., with its main plant in Waterbury, Conn., which prints newspaper supplements and comic books, will continue to do so.

The Domonel Press, which employs about 125 people in its two plants, has been incorporated as Domonel Press, Inc., and will be under the direction of R. Dale Hughes, president and general manager, and Russell G. Nelson, vice president and plant manager. Mr. Nelson has been the operating head of Curtiss Way and the Domonel Press since 1941.

U. S. Pl. Card Reports

U. S. Playing Card Co. of Cincinnati reported first quarter pre-tax income of \$660,168, equal to 43 cents per share of common stock, compared with income of \$661,479 or 43 cents a share for the same period last year. At the annual meeting, directors declared the regular quarterly dividend of 27½ cents a share, payable July 1. All officers and directors were re-elected.

R & J Expands in Cleveland

R & J Printers and Lithographers, Inc., Cleveland, has begun expansion of their offices. The new location of the firm will be 1125 Power Ave. Further expansion is planned in the near future.

CCA Assigns Three VP Posts

Container Corp. of America has reassigned three vice presidents in the Chicago headquarters office. Thomas F. Cass will have charge of all folding carton operations and the Sefton fibre can division; Harry E.

Miles will direct all corrugated container operations; Frederick S. Cryslar, will be responsible for all paper board mills and the Pioneer Paper Stock Co., a subsidiary.

Gibson Art Changes Name

Directors of Gibson Art Co., Cincinnati, O., voted on June 7 to change the name of the 110-year-old firm to Gibson Greeting Cards, Inc., to more accurately reflect the nature of the business and to provide increased advertising value.

The directors also approved a three-for-one split in the \$5 par value common stock after shareholders had authorized an increase from 400,000 to 1,250,000 shares, effective Sept. 1, when certificates for the new stock will be mailed shareholders of record on Aug. 15.

Also approved was an increase in the number of directors from seven to nine. The resignation of James R. Gibson as chairman of the board was accepted. Mr. Gibson, grandson of the company founder, was re-

elected a director. The new directors are Robert S. Johnson, vice president of the Eagle-Picher Co., and Howard F. Stryker, president of Multi-Color Type Co., both of Cincinnati. Robert F. Anderson was elected a vice president.

The annual report revealed that sales for the fiscal year which ended Feb. 29 were the highest in the company's history at \$21,579,137. This is an increase of 8.9 percent over the previous year. Directors declared a regular quarterly dividend of 50 cents a share on presently outstanding stock, payable July 1 to holders of record of June 20.


Robport Advances Two

Robert & Porter, Inc., New York, has appointed L. A. Benedict, New York sales manager, and K. D. Nickoley, Chicago sales manager.

Both men, associated with the company since 1949, attended the June sessions of the Graduate School of Sales Management and Marketing at Syracuse University.


for the **BIG CHOICE** in

PAPERS



You'll like working with and on Nekoosa Papers. They are made for today's high-speed presses and modern office machines. Nekoosa Papers lie flat, never curl, never wrinkle. And sheets run through faster, without time-consuming delays.

VERSATILE



Nekoosa
COMMUNICATION PAPERS

L. E. Oswald Honored in Wisconsin



L. E. Oswald (center) receives award from Milwaukee Civic Apprenticeship Association.

L. E. Oswald, treasurer and plant manager of The E. F. Schmidt Co., received the Milwaukee Vocational School's Civic Apprenticeship Award recently for his contributions in the development of training opportunities and programs for apprentices in the Milwaukee area in the field of graphic arts.

Mr. Oswald, past president of the Lithographers & Printers National Association and the Graphic Arts Association of Wisconsin, was instrumental in inaugurating a litho apprenticeship training program during World War II and more recently, worked with Milwaukee Vocational

School in the development of its new Litho Training Center. He is also a member of the advisory committee to the Apprenticeship Division of the Wisconsin Industrial Commission.

Receive \$10,000 Bequest

Printing Industry of Illinois has received a gift of \$10,000 from the estate of Luther P. Rogers, former president of the Rogers & Hall Co. Another bequest of \$5,000 has been received earlier from the estate of Chas. M. Stewart, a treasurer of PII for seven years prior to 1939.

Proceeds from investment of both funds will be used as prizes to en-

able graduates of the Association's Graphic Arts Institute to continue their education in the printing field.

Downie Gets LTF Post

Robert E. Downie, supervisor of printing development, Marathon Division of American Can Co., Menasha, Wis., has been appointed chairman of the research committee of the Lithographic Technical Foundation.

Mr. Downie succeeds U. G. Colson who served two years as chairman of the committee. He has been a member of the research committee since 1957 and a member of the board of directors of LTF since Sept. 1959.

He will head the committee of 200 which meets yearly to review the research efforts of LTF and to recommend to the board of directors those areas of research which should be pursued in the forthcoming year.

Mr. Downie will also be head of the research steering committee, which consists of 12 members who act as an executive committee.

for the BIG CHOICE in COLORS



The quality of our colors is excellent ... but we like to stress quantity, too. For example, Nekoosa Bond comes in twelve colors ... Nekoosa Offset, eight colors ... Ardor Bond, seven colors ... to mention just a few of our many colorful papers.

VERSATILE



Nekoosa
COMMUNICATION PAPERS

Brinkman Confers With Pres.

Harold Brinkman, president of the Cincinnati Lithographing Co., and also president of the National Small Businessmen's Association, during a conference at the White House in early June, assured President Eisenhower that some 35,000 small businessmen throughout the nation are solidly behind him in his efforts to balance the national budget.

The President was told by the group that proposals before Congress to increase minimum wages to \$1.25 an hour would hurt more workers than it would help, because many presently employed marginal workers in both large and small industries would be discharged if the present minimum wage rate is increased.

Wausau Advances Four

Wausau Paper Mills Co., Brokaw, Wis., has advanced P. J. Noel, from superintendent of finishing and customer service to sales service and converting sales. In addition, Richard Jacobus, has been moved from tech-

nical assistant to the paper mill superintendent to assistant paper mill superintendent.

Million Mile Salesman



Howard Soriano (r.), vice president of sales for Sinclair & Valentine Co., New York, receives his membership in United Air Lines 1,000,000 Mile Club, from F. Paul Weiss of United.

Mr. Soriano accumulated the mileage from his travels while directing ink sales for S&V.

Wightman Gets Rapid Post

Rapid Roller Co., Chicago has appointed A. M. Wightman as technical director.

Mr. Wightman had previously been with the Dayton Rubber Co. and the B. F. Goodrich Chemical Co. He succeeds Mr. Philip Schwartz, who retired from this position after 36 years service.

Sun Opens New Research

Sun Chemical Corp. New York has appointed Samuel B. MacFarlane, Jr., as vice president of research, a newly-created position.

Mr. MacFarlane, formerly manager of central research laboratories for Celanese Corp. and vice president-technical director of Onyx Oil & Chemical Co., said that company's new research program will be oriented more closely toward the chemical industry generally while continuing and broadening the research work in printing inks, coatings, paints, resins, and pigments.

for the **BIG CHOICE** in

finishes



Using an unusual fancy finish can add distinctiveness to even the most ordinary printing job. Whether you require standard finishes or fancy finishes, Nekoosa Papers, more than ever, give you the **BIG CHOICE!**

VERSATILE



Nekoosa
COMMUNICATION PAPERS

Azoplate Moves Rogowsky

Azoplate Corp., Murray Hill, N. J., has appointed Walter D. Rogowsky as technical sales representative in the Baltimore-Washington area. He had been a technical representative in New Jersey.

Hamilton Advances Three

Hamilton Mfg. Co., Two Rivers, Wis., has appointed George Zimmerman as service manager succeeding Charles Ruelle. In this position, he will direct the entire service operation of the company.

Donald Kassner has been appointed to succeed Mr. Zimmerman as product service Engineer.

Allan J. Bergey has been appointed to the newly created position of adjustment supervisor for product service, by the company.

Hammermill Buys Old Colony

Hammermill Paper Co., Erie, Pa., has purchased a controlling stock interest in the Old Colony Envelope

Co. from the Strathmore Paper Co. for an undisclosed amount. Strathmore continues to hold a minority interest in Old Colony.

Old Colony, Westfield, Mass. will continue to operate under its present name. The present management with J. A. Charbourne as president will be retained and the sales, purchasing and management policies will be continued.

Annual sales of Old Colony are approximately \$6,000,000 made primarily to independent merchants.

NAPL Convention dates and locations for the next three years are:

1960—The Conrad Hilton, Chicago, Illinois—October 5th to 8th.

1961—Hotel Commodore, New York, N. Y.—September 27th to 30th.

1962—Hotel Ambassador, Los Angeles, California—September 19th to 22nd.

Bingham's Son Appoints Gothe

Sam'l Bingham's Son Mfg. Co., Chicago, has appointed D. W. Gothe as manager of the Baltimore division. Mr. Gothe will direct Bingham Bros. Division, sales and service activities in the Maryland, Virginia and D. C. Area.

Advertising Road Atlas

Rand McNally & Co., Skokie, Ill., introduced an extensive billboard campaign on behalf of their road atlas before those who attended the Indianapolis Memorial Day race. The 24-sheet posters in six colors, were part of an \$80,000 outdoor advertising campaign to be conducted on a nationwide basis from May through September.

Brown Retires From Strong

Harold E. Brown, vice president in charge of sales for Strong Electric Co., Toledo, O., has retired after 25 years service with the company. He will continue to serve as a consultant on a part time basis.

for the **BIG CHOICE** in **WEIGHTS**



Light weights—medium weights—
heavy weights—and all the weights
in between. Nekoosa Papers have
'em! In fact, our lineup of weights
looks like a Golden Gloves
tournament... giving you the **BIG
CHOICE** that'll put a punch in
all of your printing!

VERSATILE



Nekoosa

COMMUNICATION PAPERS

Selection Techniques For Supervisors Studied

TECHNIQUES for identifying, selecting, and evaluating supervisory personnel were analysed and applied to case study situations at a three day workshop for printing industry personnel directors, held last month by the Educational Council of the Graphic Arts Industry in Atlantic City, N. J. Dr. Joseph King, president of Industrial Psychology Inc., New York, led the sessions at which thirty industry executives learned how to recruit potential supervisory personnel through interviews and aptitude and personality tests.

Industrial Psychology, Inc., is a national psychological research organization, and one of the major publishers of psychological tests for use in the business and industrial field. Established in 1947, the company, has worked with over 4,000 companies in the U. S. and other countries in developing a series of

personnel tests for use in better selection, placement, training, merit rating, salary administration, employee development and other phases of personnel administration.

Plans are now being discussed to have Dr. King, under sponsorship of the Education Council, conduct workshops similar to those he conducted for the conference, in major printing centers throughout the U. S. Also being considered is the development of a series of "hiring profiles" for several key front office and plant supervisory positions with specific application to printing plant management operations.

The conference was opened by a seminar session on "The Future of College Programs in Printing Management." Speakers were: Dr. Donald C. Metz, University of Dayton; Dean Norman Rice, Carnegie Institute of Technology; Dean W. I. Cole, Northwestern University; and Bryon G.

Culver, Rochester Institute of Technology.

Others speakers who addressed the conference were: Boris Speroff, industrial relations director, LPNA; Steven Borik, manager, managerial development, R. R. Donnelley and Sons Co., Chicago; Mary Harland, assistant personnel director, Triangle Publications, Philadelphia; Dr. Seymour Beardsley, president, institute for Personnel Psychology, Washington, D. C.; William Emmert, employment manager, R. R. Donnelley and Sons Co.; and Richard Haumersen, assistant to the executive vice president, Western Printing and Lithographing Co., Racine, Wis.

A summary of the Conference, prepared by Ann C. Jeffreys, director of industrial relations and personnel, National Publishing Co., Washington, D. C. states, "This conference developed answers to two areas that have been the subject of argument for the past ten years:

"1. For any real validity, some psychometric aid must be included

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in any program for predicting supervisory potential.

"2. No one method of evaluating supervisors is the best for all levels of supervision or all companies.

"At the lower levels of supervision or because of company size, the moderate cost of pen and paper tests may dictate their exclusive use. Similarly, big companies with a need for a large supervisory staff at pyramiding levels of responsibility can effectively rely on pen and paper tests for lower levels of supervisory jobs.

"However, as supervisors move up in the hierarchy, the cost of mistaken selection and the limited number of candidates creates a need for a more precise and definite measurement of maximum potential. Past mistakes of over-reliance on the package test have been giving way to the more exact and tailored evaluation of the diagnostic interview. As a general conclusion, I would say that those of us participating were ahead of the industry in this area of using scientific aids."

Chairman of the conference program was Loren F. Minnick, director, organization development, Standard Register Co., Dayton, O.

Proceedings of the conference are available free to participating members; to contributing members at \$10.00 per copy; and to non-members at \$20.00 per copy; at the council's offices at 5728 Connecticut Ave., N. W. Washington 15, D. C.

Mueller Co. Expanding

Mueller Color Plate Co., Milwaukee, has begun an expansion and

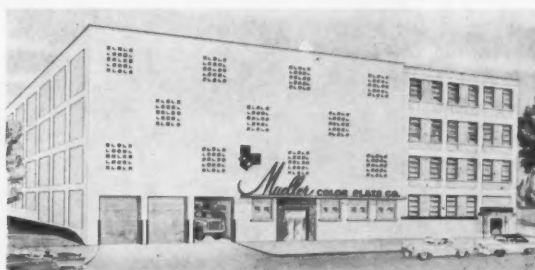
remodeling, which will add approximately 40,000 square feet to its plant.

The expansion move was necessitated by its need for more space and facilities in its litho and roto-gravure divisions. The planned completion date for the project is early this fall.

The firm which started operation in 1949, with a complement of 30 employees now has a staff of over 250 Craftsmen.

The company has branch plants and sales offices in Chicago, Detroit, Battle Creek, New York, Denver and Los Angeles.

Artist's conception of new Mueller plant



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RIT Proposes Information Service

THE Rochester Institute of Technology has proposed creation of a centralized information service for the graphic arts industry.

The Institute has sent a letter to equipment manufacturers, printers, trade organizations, research groups and education organizations, suggesting establishment of such a service.

Response to the letter has been such that RIT has decided to sponsor a meeting in Rochester to discuss what an information service should offer, how it should be organized, where it should be located and how it should be financed.

Some of the questions to which the meeting will seek answers are:

1. Are the needs of the industry being adequately served by the separate information services of the various trade and research organizations?

2. Are the individuals who need information being given help in seeking information?

3. Are there gaps in the services presently being offered? Does the size and nature of the library of graphic arts information require a well organized mechanized storage and retrieval system so that all pertinent literature can be systematically filed and quickly located when the need arises?

Having conducted an industry-wide information service for about ten years, the Institute has drawn certain definite conclusions from this experience.

Many organizations run an information service as a sideline to their primary purpose of research, education, management advice or consultation. Very few if any organizations are in a position to efficiently provide all the various information services such as searching and retrieval, abstracts, facsimiles, or referral to experts in related fields. None is equipped with a mechanical storage and retrieval system adequate for the vast number and variety of existing items.

There has been no organized attempt to train individuals in the printing industry to ask questions in-

telligently. This is a vital function which must be performed if the industry ever expects to rise to the technical level already reached by much younger industries.

The Institute feels that a centralized information service would be more efficient, more economical and better able to cope with the growth of data in the graphic arts field.

MLA Issues 1960 Cost Book

Members of the Metropolitan Lithographers Assn., New York employer group, have received the 1960 edition of the lithographic hourly cost rates for the New York area. The booklet is a formula for determining hourly cost rates in selected cost centers, together with schedules of basic costs in three areas: (a) investment in cost centers (equipment); (b) direct labor costs (based on actual average wage rates); and (c) light, heat and power costs.

Average hourly cost rates are demonstrated, based on the formula used, for each size of equipment in common use, and for hand operations such as stripping and dot-etching. Press sizes cover range from 10x14" to the large 4-color presses. Both one and two-shift operation costs are demonstrated in the booklet.

Apprenticeship Analyzed

Apprenticeship practices at Schmidt Lithograph Co., San Francisco, were discussed by Stewart Norris, factory manager, at a graphic arts apprenticeship panel discussion recently held in San Francisco. The event was part of the three-day California Conference on Apprenticeship.

Mr. Norris illustrated the importance of the apprenticeship program at his company by pointing out that Carl Schmidt, the firm's president, personally presents journeymen's certificates to accomplished apprentices.

Analysis and evaluation of apprenticeship records of men who have become particularly productive is a Schmidt practice which helps in the selection of new apprentices, said Mr. Norris. The firm attempts to give

each apprentice well-rounded experience, because it finds that men gain by knowledge of processes related to those they themselves perform.

Ivan T. Brandenburg, president of ALA Local No. 17 (covering Northern California) expressed hope that a union school for lithographers can soon be established in San Francisco. He pointed out the value of similar schools, financed by employers and negotiated under contracts, in New York and Chicago. He stressed the importance of such a school not only for the training of apprentices but also for the re-training of experienced journeymen whose jobs are wiped out by new techniques and processes.

Mr. Brandenburg stressed the importance of screening applicants.

PRI Elects Landis

Printing Industry of Illinois, at its 35th annual business meeting in Chicago, elected Fred C. Landis of Peoria, president for the coming year. Mr. Landis, who is executive vice president of Logan Printing Co., Peoria, is the first person from outside the metropolitan Chicago area to become president of this statewide printing association.

Norman B. Jacobson, president of Huron Press, an offset firm, and Joseph J. Hennessey, head of Sherman-Hennessey Printing Co., were elected vice presidents and Walter G. Steinmeyer, vice president, Diversey Printing Co., was re-elected treasurer. James X. Ryan was continued as secretary and general manager, and J. Norman Goddess as general counsel. Twelve of the 20 members of the new board of directors represent offset firms.

At the meeting certificates were presented to 125 students who completed courses they had started last fall in the association's Graphic Arts Educational Institute. George C. Melin, chairman of the education policy committee made the presentation. Speakers at the evening banquet included Eugene Flack, president of the Advertising Council of New York, and Floyd Simerson, vice president of Sears, Roebuck & Co.



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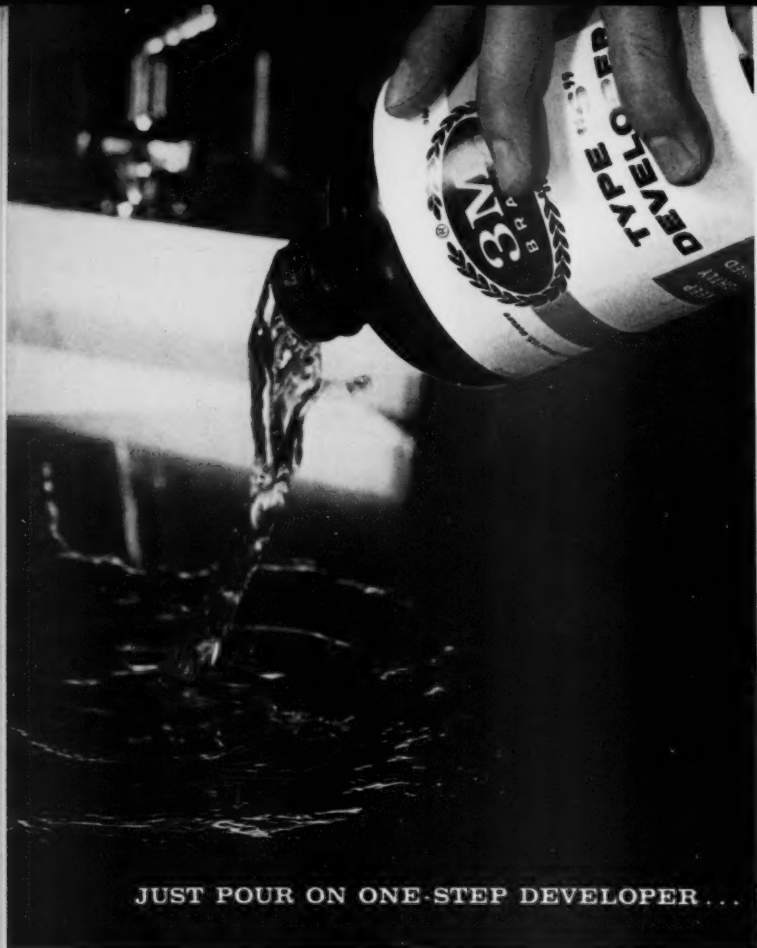
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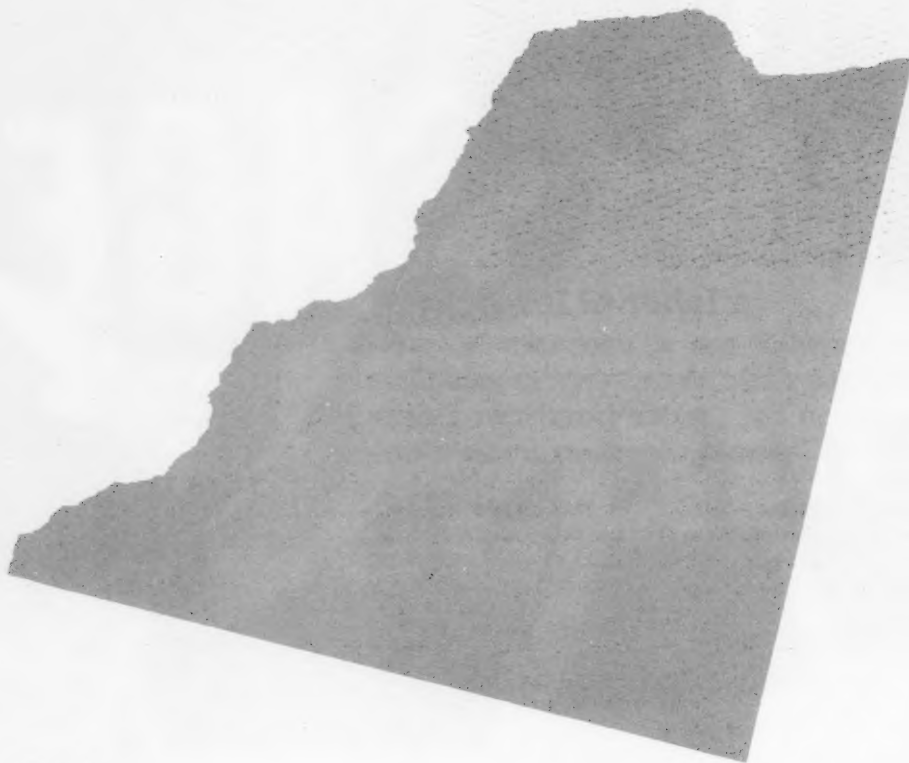
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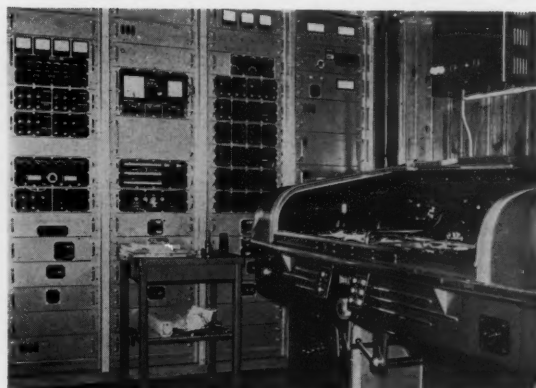


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First Colorgraph Scanner Installed in N. Y.



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Colorgraph
Scanner and
Computer

THE first commercial use of color material prepared through use of the Colorgraph Electronic Scanner is being made by Graphic Publishing Co., New York.

The Colorgraph is designed to perform the operations normally done by masking, in preparing separations for color lithography. The unit consists of a scanning device which operates on much the same principle as a television camera, that is breaking the image down into a series of lines of varying light intensity. In this case the image is scanned at the rate of 250 lines per inch. The scanning is done by a spot of light focused to a pin point. As the dot moves across the copy or negative it is reflected in varying intensity, according to the light and dark areas in the negative. This fluctuating light activates a photo-sensitive cell, which generates a corresponding current of electricity.

This fluctuating electric current is then fed into a computer which adjusts the flow according to the desired corrections for a given color in a three- or four-color job. Thus it is possible to perform the job of undercolor removal in preparing positives or negatives for platemaking.

The manufacturer, Rudolph Heil, West Germany, points out that since the machine works from already separated negatives, it has a greater latitude as to the size of copy and quality of correction than the other scanners which start with original copy. (See ML—Nov. 1959, page 52.)

The three-color separations to be used in the machine are made in the conventional manner, standardized under shop conditions by routine density measurements and grey scale plottings which are photographed adjacent to the copy. The machine can produce three- or four-color corrected positives from the uncorrected separations.

The scanner can handle a maximum plate size of 12 x 15", the running time for which is one hour and 40 minutes. Smaller plates require proportionately less time.

The electronic computing and amplifying section of the unit are enclosed in a separate control cabinet. The controls allow for settings to adjust for the varying factors in the correcting process. The influence of emulsion differences and filter variations can be taken into account, as well as different contrast ranges in the separations, according to the company. The amount of undercolor removal in the black printer can also be regulated within a wide area.

The first installation in the United States is at the Collier Photo Engraving Co., New York, the parent company of Graphic Publishing Co., litho and letterpress house.

Plan N. Y. Printing Course

The Navigators, New York, are offering a 20-week field course for students of the printing and allied industries. The course is designed pri-

marily for those who wish to increase printing skills already learned.

Malcom Klein has been appointed coordinator of the course, and Syd Rapoport is chairman and principal instructor.

Plans call for one evening session a week, 7 to 9, beginning in September and continuing through March. During the course, students will visit the plants of printers, lithographers, gravure printers, photogelatine printers, silk screen printers, platemakers, electrotypes, typographers, binders and a paper mill.

Following the plant visits, students will meet for discussion periods, which will be conducted by Mr. Rapoport.

Enrollment has been limited to 35. Members of The Navigators will be given preference, but non-members may apply for enrollment.

Information is available from Malcom Klein, The Weaver Organization, 46-13 11th Street, Long Island City 1, N. Y.

Will Moderate Tech Session

William J. Stevens, Philadelphia district manager, for The Miehle Co., Division, Miehle-Goss-Dexter, Inc., Chicago, has been appointed moderator for the technical session at the N.A.P.L. convention in October. This will be the all day Saturday Technical Session which is to be part of the 28th Annual Convention.

Gets \$3,400,000 Press Order

Harris-Intertype Corp. has received a \$1,200,000 order for multicolor offset lithographic printing presses from Western Printing and Lithographing Co., Racine, Wis., making a total of \$3,400,000 in orders from the same customer in the past year.

The company said the order is the largest ever booked for sheet-fed offset presses.

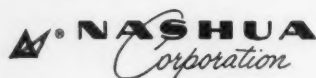
During the next 15 months the entire \$3,400,000 in presses will be shipped to Western's plants in Racine and Poughkeepsie, N. Y. Included are two web-fed eight-color presses to be manufactured by the Cottrell division, Westerly, R. I.

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PIA Craft Awards to 135

Certificates of craftsmanship from the Master Printers Section, Printing Industry of America, were presented to 135 employees of six mid-west printing firms at the second annual award dinner, June 6 in Cincinnati, O.

The awards were distributed by James N. Johnson, president, Standard Publishing Co., and McDonald Printing Co.; John Powell, president, Powell & White Printing & Publishing Co.; Robert Lawson, president, The Bohnett Co.; Dr. Grant H. Brown, president, American Book Co., all of Cincinnati, and Wilson L. Moon, general manager, Greenfield Printing & Publishing Co., Greenfield, Ohio.

John D. Rockaway, managing director of the Graphic Arts Association of Cincinnati, served as master of ceremonies. The principal speaker was John Doesburg of Washington, D. C., general counsel, Master Printers Section.

OPI Elects Taylor

Wayne Taylor, Pacific Color Plate Co., Portland, Ore., has been elected president of Oregon Printing Industry, Portland Division. Robert Hallwyler, Hallwyler Printing Co., is the new vice-president, and Thomas Bailey, The Irwin-Hodson Co., is secretary-treasurer.

Elected to the board of directors were Robert Dahlstrom (past presi-

dent), Glass-Dahlstrom Co.; Roger Bachman, The Arcady Press; Robert Wack, Schultz-Wack-Weir, Inc., and Robert Rickett, Agency Lithograph Co.

Del. Valley Buys Dorville

The acquisition of the Dorville Corporation, Paoli, Pa., a well known specialty printing house for the past 22 years, was announced last month by Joseph C. Golden, president of Delaware Valley Printers, Inc., Philadelphia.

Headquarters for both firms will be at the Paoli, Pa., address. Mr. Golden will continue as president of both firms, with I. D. Golden as vice-president.

Delaware Valley Printers, Inc., the parent firm, was formed seven years ago by Mr. Golden, who at that time acted as a printers broker. In 1958, he expanded operations by adding Delaware Valley Associates, a sales promotion agency, to the parent firm.

The new company includes a complete art service, camera and platemaking facilities, a sales promotion department and a complete printing plant. The firm employs 25 men and women.

Elmer Pusey To Retire

Elmer M. Pusey, business manager of Judd & Detweiler, Inc., Washington, D. C., retired from active duty

at Judd & Detweiler at the end of June. He had been associated with the firm for the past 36 years. He plans to divide his time between his farm at Sugar Loaf Mountain, his new home in Chevy Chase, and his work as a consultant to Judd & Detweiler, Inc.

Always active in association activities, both local and national, Mr. Pusey twice served as president of Printing Industry of Washington. He also served on the association's board of directors, the executive committee of the Union Employers Division, and as a member of the division's many negotiating committees. He has been treasurer of Printing Industry of America, and is currently chairman of the finance committee.

Printing Teachers To Convene

Printing teachers from all parts of the country will attend the 35th Annual Conference on Printing Education of the International Graphic Arts Education Association in Houston, during the week of Aug. 14-19.

The International Graphic Arts Education Association, an affiliate of the Education Council of the Graphic Arts Industry, is the professional organization for printing and graphic arts teachers in secondary schools and colleges throughout the United States and several foreign countries.

Its membership of close to 1,000 teachers holds state and regional meetings during the school year with the week-long annual conference as the major policy and study event of the year. The theme for this year's conference is, "New Trends in Graphic Arts Education in Secondary Schools and Colleges."

A series of workshop sessions during the conference is expected to result in the publication of up-to-date suggested courses of study in graphic arts education for all levels of school systems. Speakers for various sessions will represent the printing industry, graphic arts and general vocational education.

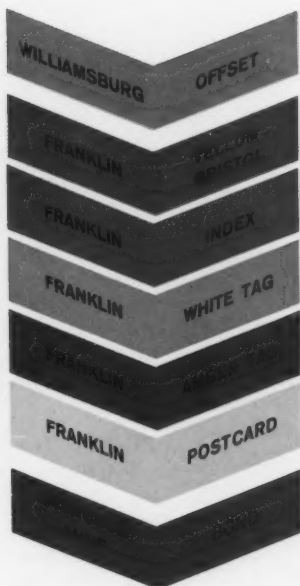
A full round of recreational activities for the teachers, as well as their wives and children, are planned for the five day event.

Ten New Members Admitted to 3M Sales Fraternity

Ten members of the Minnesota Mining and Manufacturing Co. printing products sales staff who recently were admitted to The Gripps, a sales fraternity within the company. Shown (l. to r.) are Robert Golobic, William Atkison, Daniel Duffy, George Kautz, Bernard Hurley, Verlyn Phillips, Roger Nygard, William Temple, Frank Hoffman, and Keith Reynolds.



...and at their best when they roll into action!



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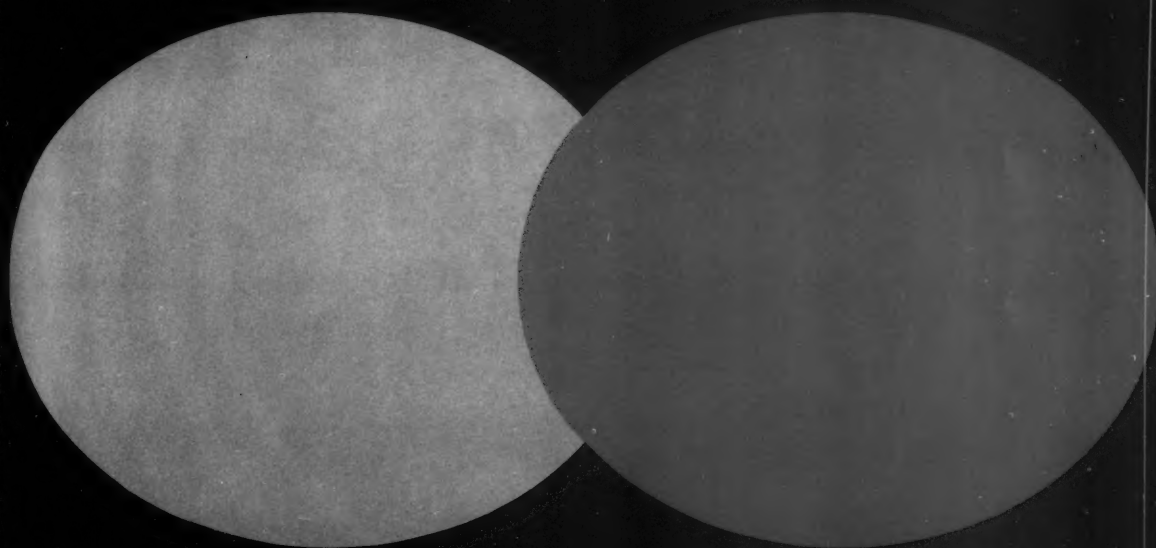
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March 15, 1960

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The modern, high pressure Plastic Surface for Furniture.
Beautiful PANELYTE adds to the life of your furniture.
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DON'T use scouring powder or pads.

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An added feature of fine furniture.

Labels printed on TROJAN FOIL—like this one—assure you of better results every time. That's because TROJAN's exclusive **superior surface smoothness** lets you reproduce as many colors as you want, run as many press passes as you need, and print with less ink. TROJAN FOIL will die cut, emboss, score and fold perfectly, and offer

fewer registration problems than any foil you've ever used. Try it on your next job—it pays!

A point of interest: When Panelyte switched from paper to foil for its gold foil seal, use of this label by dealers increased **300% in one year!**

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MODERN LITHOGRAPHY, July, 1960



Craftsmen Plan Convention

Plans for the 41st Annual Convention of the International Association of Printing House Craftsmen, to be held Aug. 7 to 10 in Atlanta, have been announced. The program includes a number of talks on various phases of lithography.

The offset topics scheduled for discussion are: "How Does Web-Offset Get that Way?," Albert I. Love, Foote and Davies, Inc.; "Offset Platemaking With The New Materials," Albert Materazzi, Litho Chemical and Supply Co.; "Camera Magic in the Printing Processes," Bernard Halpern, Du Pont; "On the Press: Offset," Henry C. Daniel, Atlanta Lithograph Co.; and "Paste Make-Up vs. Metal Make-Up," Edwin Bachorz, Western Printing and Lithographing Co.

Other topics which should be of interest to lithographers are: "Flexography vs. Rotogravure vs. Letterpress vs. Offset in Packaging," Jess Hand, Mead Packaging; 'Brightype', George Morrison, Ludlow Typograph Co.; and "Wrap-Around Plates," Charles Wortman, Harris Seybold Co.

In addition to the two days of technical sessions, there are several social activities planned, including an Old South Party, a Theater Under the Stars with a pre-Broadway production of "Tom Sawyer," a banquet and a ladies' and childrens' program.

Curran Joins GAP

Thomas J. Curran, former assistant executive director of the Lithographers and Printers National Association and director of its Label Manufacturers Division, has joined the sales staff of Graphic Arts Press, Inc.

Mr. Curran has been active in local and national trade association activities as vice-chairman of the Washington Trade Association Executives membership and program committees and treasurer of the Graphic Arts Association Executives. He is also a member of the National Association Executives Club of Washington, D. C.

Formerly associated with the Printing Industry of America, Mr. Curran was also senior sales representative



Thomas J. Curran

for the Addressograph-Multigraph Corp. and the Commerce Clearing House in New York City.

Lord Baltimore Realignment

Allen Staley, formerly assistant to the president of Lord Baltimore Press, was elected vice president—sales last month as part of a realignment of executives. He will have direct responsibility for the line sales activities of Lord Baltimore's Eastern and Midwestern divisions. He will also direct related departments, including market research, creative design and advertising and will coordinate sales with Lord Baltimore's California operations.

Frank J. Bagamery has been elected vice president — industrial relations and personnel. Mr. Bagamery formerly was director of industrial relations and personnel. He will assume management responsibility for administering the company's labor relations and personnel programs, including recruiting, training and organizational planning.

Roland F. Boehm was named administrative assistant to the executive vice president. He will supervise new product development and will handle special management assignments formerly performed by the executive vice president. Mr. Boehm previously had served as Lord Baltimore's general sales manager.

Leonard Dalsemer, president of the firm, said that W. Taylor Bouchelle, vice president—advertising and public relations, will work directly with

Mr. Staley to expand promotional activities and to coordinate them with marketing and sales.

'How To Measure Quality'

The 10th annual program "Quality Control for the Graphic Industries," held in Rochester, June 6-10, and sponsored by the graphic arts research department of the Rochester Institute of Technology, was principally concerned with "How To Measure And Control Printing Quality."

Sampling plans and process controls were discussed and examples of their applications in the printing industry were explored. Case histories were used to emphasize the need for quality control in the industry.

The program was designed to introduce the individual to basic statistical quality control and to familiarize him with practical operating methods required to introduce and administer such a quality control program.

Both producers and buyers of graphic arts materials had an opportunity to examine ways of ensuring a more uniform product, more precisely measured at a lower cost level. Practice was given participants in the actual plotting of control charts and their interpretation as a practical process control tool.

One of the features of the program was a round table discussion approach to problems. The evening sessions provided individual registrants with an opportunity to discuss with faculty members their particular interests in methods and techniques for improving efficiency and quality, and a shortcut for solving many of their own quality control problems.

The teaching staff included members from the graphic arts industries and educational institutions.

At the close of the program, the third annual R.I.T.-S.Q.C. Award for outstanding contributions to quality control in the graphic arts industry was awarded to Dr. Carl Noble, director, Consumer Acceptance Department, Kimberly-Clark Corp.

The program will be held again next year in Rochester, it was announced.

Portland Employers, ALA Settle

Lithographic employers in Portland, Ore. and the ALA have settled on a new two-year contract, effective until March 1, 1962. It is retroactive to March 1, 1960.

The contract calls for a \$4 a week increase for all journeymen, except Multilith departments and 14 x 20" pressmen, effective March 1, 1960; a \$1.50 increase effective Nov. 15, 1960; and a \$4 increase effective March 1, 1961.

Multilith departments and 14 x 20" pressmen are granted an increase of \$3.50, effective March 1, 1960; a 75 cent increase effective Nov. 15, 1960; and a \$3.50 increase effective March 1, 1961.

Feeders, apprentices and general workers are granted the same percentage increase as the basic journeyman scale, which amounts to 3.3 percent on March 1, 1960; 1.2 percent on Nov. 15, 1961 and 3.17 percent on March 1, 1961.

An additional contribution to the health and welfare fund of 25 cents this year and 25 cents in 1961, has been granted. This will bring the total to \$3 a week after March 1, 1961.

Workers will be given three weeks vacation after one year of service instead of after two years.

Language changes in the contract include: (1) a recognition clause which defines lithographic production employees as those covered by specific wage classifications; (2) a savings clause to allow employers to sign other contracts, covering lithography, under certain conditions; (3) a struck work clause subject to modification if such a clause be modified in any other ALA contract, by a court having jurisdiction; (4) a modified trade shop clause; (5) a modified refusal to handle clause; (6) a separation clause similar to San Francisco; and (7) retroactive pay given on straight time basis.

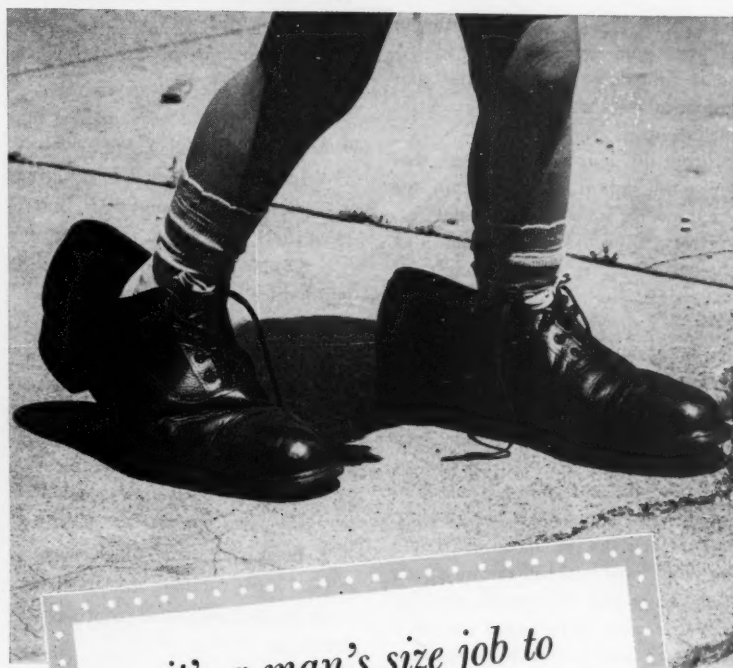
TAGA

(Continued from Page 38)

and (5) the overall content of the blanket with the paper in the impression nip.

In addition it suffers from the use of poor pigments, the fact that papers are not white, and the graying of halftone tints. Developments in photography, platemaking, press, and paper and ink are helping to eliminate these limitations. Discussed are the use of balanced inks, better plates, the Dahlgren and other dampening systems, a new disposable blanket, ink transfer and tinting studies, and work on the development of a print quality instrument that may eventually lead to automation of quality on the press.

Complete proceedings of the TAGA meeting, containing all papers as well as questions and answers that followed, may be obtained, at \$10 a copy, from Technical Association of the Graphic Arts, P.O. Box 3064, Federal Station, Rochester 14, N. Y. Several complete talks will be published in future issues of MODERN LITHOGRAPHY.★



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Looking Ahead In Graphic Arts

By Stanley R. Rinehart
President, National Association
of Photo-Lithographers

THIS sleeping giant, the graphic arts industry, is just beginning to awaken—so you and the industry are about to take a big stride forward. Whether you made the decision to enter the printing field by choice or by chance, I can assure you it has been a fortunate decision, which will be confirmed as time moves on.

Since you intend to help pilot this giant, you will have to exercise good leadership; and you must find, by trial and error, the branch of the industry in which you can excel—and then apply yourself with all that singleness of purpose that will enable you to become successful in the field. Then you will reap the rich rewards awaiting you.

What about the Future of the Graphic Arts Industry? It seems particularly appropriate to look ahead as far as we can. An analysis of what may be ahead quickly indicates that most of the excitement to which we are all subjected has to do with equipment, techniques, procedures, methods and the printed product itself.

I believe you will agree with me that, while these features are essential to our industry, the most important feature is getting only limited attention. The feature getting only limited attention is "You" — the students.

Equipment, procedures and capital are worthless without "You." We hear a lot about automation, electronics, high speed, better materials, etc., but these things are meaningless

From a commencement address delivered at graduation exercises of the School of Printing Management conducted by Printing Industries of Philadelphia, Inc.

and, finally, profitless without your efforts, your ingenuity, your resourcefulness, your daring, and your guidance — I mean your executive management.

From this it is easy to deduce that the most important element in the graphic arts industry, now and forever, is "You." For this reason, I challenge you to exercise vigorous leadership in administering the "You" of our industry.

A Look Back for Comparison—In order to look ahead with confidence and purpose, we must first look back to see where our industry has been and what it has accomplished, what it is accomplishing and its potential. From these comparisons we can see more clearly the job ahead of "You." We don't have to go all the way back to the beginning of movable type for comparison. A more recent period is sufficient; and for several reasons, which we will learn about in a few minutes, let's select the last 40 years.

As you no doubt know, the graphic arts industry is one of the oldest industries in the world. Geologists and historians tell us the earliest and most primitive people quickly found ways of communicating with each other by signs, graphs, and words—thus graphically expressing their feelings and wants. The most backward people of today, also, have ways of expressing themselves graphically.

With this as a brief historical background, you should not be surprised to hear that printing, one of the modern methods of expression, is essential to all of us. I can refer to its essentiality in almost every field of human endeavor—be it science,

education, culture, commerce, government, sports, communication or entertainment. Even on the edge of wildernesses, missionaries, explorers, and conquerors, even armies, quickly set up printing shops to print political regulations, almanacs, language books, newspapers, catechisms, sermons, or propaganda material. This clearly shows how printing serves the needs of every community and thus becomes an integral part of its cultural and economic activity.

Before I am accused of exaggeration, here are a few everyday items of printing that we take for granted:

1. Newspapers, books, periodicals, magazines
2. Wallpaper
3. Clothing
4. Linoleum and tile floor coverings
5. Clock and watch dials, instrument dials on TV sets, instruments
6. Chinaware, including milk, soda pop bottles and their caps
7. Identification inside clothing—hats, shoes, etc.
8. Articles of commerce, such as Paper money, Negotiable instruments, Insurance policies, Postage stamps, Business forms, Identification on equipment, Envelopes and Grocery bags and Checks.
9. Beer, and many other, cans
10. Labels for food and medicine
11. Reproductions of paintings and drawings
12. Catalogs
13. Telephone directories
14. Dinner table place mats
15. Boxes, cartons and containers, etc.

This should be enough to prove that printing is essential and will continue to be essential. Many people thought that radio and TV would tend to reduce the volume of printing; but, as you know, the ratio of books, magazines, and newspapers today is much greater than it was before the advent of radio and TV.

The Department of Commerce estimates the dollar volume for the printing of books, magazines, literature of all kinds, labels, greeting cards, busi-

(Continued on Page 117)

Save **\$1.50** by entering a **GROUP** subscription
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LOOKING AHEAD

(Continued from Page 114)

ness forms, etc., to be over \$6 billion in 1959 and \$6.5 billion in 1960—yet profits in this traditionally low-profit industry are only 50 to 60 per cent of the average of all industries.

Printing, as an industry, is made up of an estimated 40,000 to 45,000 establishments averaging about 15

employees each. It ranks among the several largest industries in size and in number of establishments in this country. One-third of these establishments are suppliers who sell printers paper, ink, film, etc. The remaining two-thirds are printers. It is estimated that 68 per cent of the printers employ as few as 10 persons each. Only 3 per cent of the printers have 100 or more employees, and only 25 establishments have more than 1,000 employees.

As you might expect, 3 per cent of the plants (or those of 100 or more employees) account for about half the annual volume of printing produced in this country—and the 68 per cent (or those with fewer than 10 employees) account for about 12 per cent of the volume.

From these few statistics, it is apparent that day-to-day performance in a printing plant must be based, to a very great degree, on craftsmanship and individual ingenuity. This makes for complexity. I have always felt that *printing is as complex as the customer's imagination and the printer's ingenuity*. Under these conditions, most printers have had little money and practically no time to devote effort to technical developments. Broadly, no one segment of printers had enough "togetherness" or enough money for improvement through research. It has been said, many times, that printing is technically and administratively backward when compared with other industries, but I can enthusiastically say this is changing.

I have sketched for you the general character of the printing industry. I would like to sketch, in some detail, both technical and administrative progress over the last 40 years. I selected 40 years for two reasons: first, it is almost the span of my personal experience; and second, it embraces two post-war periods. Historically, post-war periods show greater growth than other periods. In order to get a better perspective, let's divide this 40-year period into two specific periods, i.e., from 1920 to 1945 and from 1945 to 1960.

Developments 1920 to 1945

The significant technical developments in the 1920 to 1945 period were:

1. The introduction in the early '20s of small high-speed flat-bed cylinder presses. These more than doubled the output of work suitable for production on such equipment.

2. In 1922, a most important thing happened—a few lithographers (or offset printers), got together and established the Lithographic Techni-

(Continued on Page 125)



LOAD
Lift the glass, position the negative and plate.



FLIP
Close the glass frame. Pull the release knob and flip the vacuum frame over.



EXPOSE
Set the timer. Automatically controlled carbon arc lamp is built into the base with the reflector.

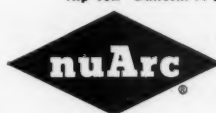
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Hundreds of leading photo lithographers and photo engravers know, there is no easier or faster way to make perfect plates.

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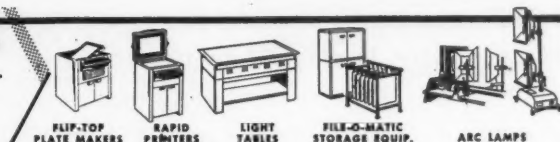


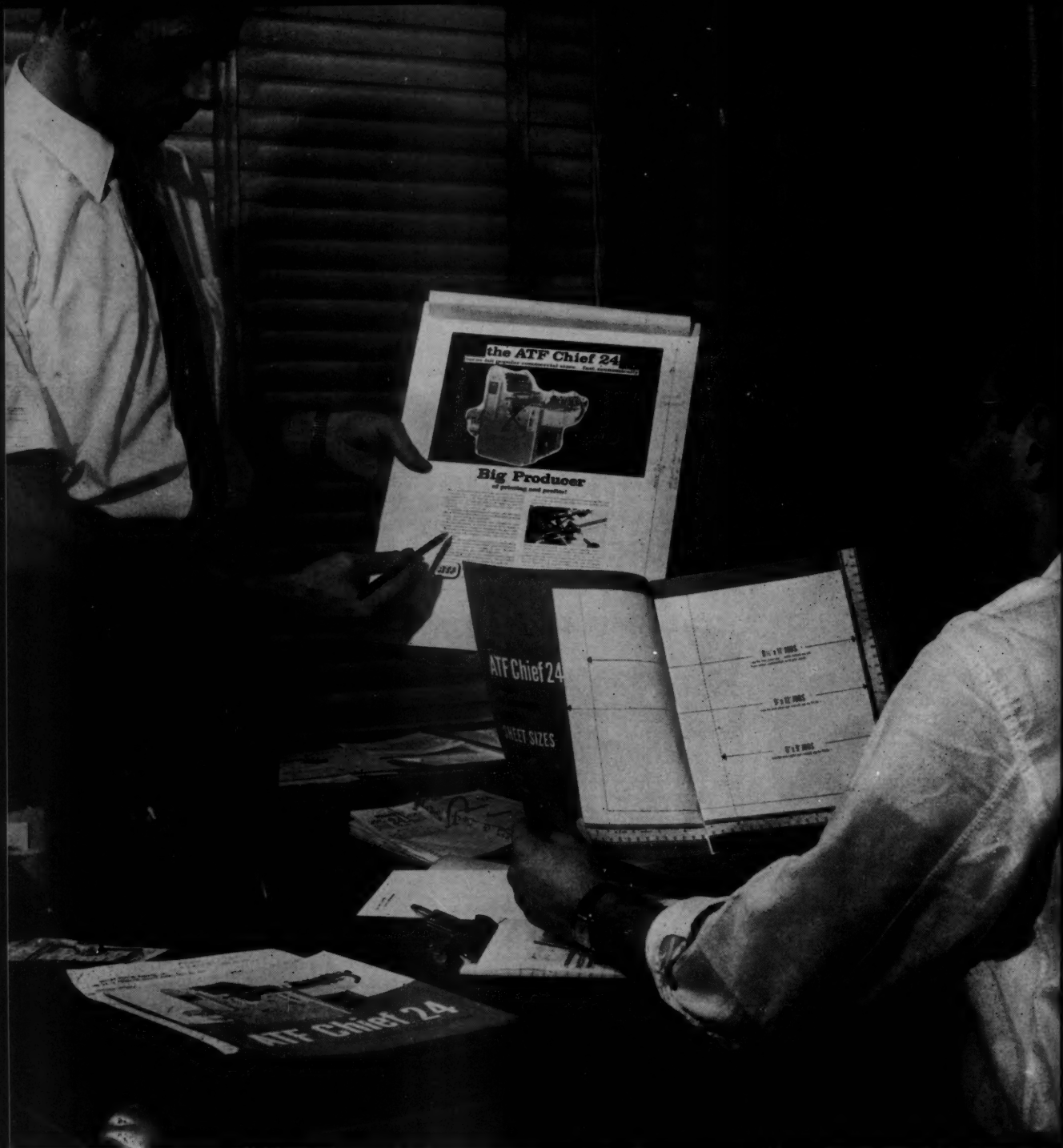
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28 • 32	MODEL FT-32
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OR 9 x 12" JOBS FOUR-UP. *Write for Literature.*



American Type Founders

200 Elmora Avenue, Elizabeth, New Jersey

ATF type faces used in this advertisement: Century Schoolbook with Italic and Craw Clarendon Book

Automatic Step and Repeat

Consolidated International Equipment & Supply Co., Chicago, has introduced a new automatic step and repeat machine. Called the Multineg 32, the machine will reportedly produce step-and-repeat negatives or positives on film, glass or press plates.

According to the company, the machine operator need dial only two scales, one for horizontal dimension, the other for the total movements. Operation is then automatic. An illuminated read-out device indicates how many exposures have been made. A control is provided to automatically stop the machine, allowing changes to be made on the negative chase. The light source has been improved to give better overall uniform lighting to meet the critical requirements for the new higher speed films.

The machine will handle film or plates 26 x 32". It is equipped with a new dial selector vacuum back, and extended table and pin system. This enables the operator to produce a film in one piece up to 32 x 50".

Introduce FotoPlate 8

S. D. Warren Co., Boston, is introducing a new negative-working, pre-sensitized lithographic plate for the offset duplicator field. The plate is manufactured in 16 sizes for presses 8½ x 12" up through 17 x 22", and it is distributed in the United States and Canada by FotoPlate distributors and Addressograph - Multigraph Corp.

The features of the plate, cited by the company, are its low initial cost, rapid development time and versatility. A new faster sensitizer reportedly reduces exposure time and permits faster roll-up, less waste and high-speed processing.

Three methods of development for the plate include on press development of freshly exposed plate; use of a new one-step developer and desensitizer; conventional development and desensitizing with developing ink and gum.

Litho Club News

(Continued from Page 75)

Tucker, RB & P Chemical and Supply Co.; Leo Dian, Lewis F. Dow Co.;

Harold Burns, John Roberts Co.; Robert Kinkaid, Minnesota Mining and Manufacturing Co.; and Donald Malone, H. M. Smyth Co.

A tour of the Northwest Paper Co. plant, at either Brainerd or Cloquet, Wis., will be held by the club on Aug. 6. The tour will begin in the morning and include a review of the entire papermaking operation from logging site to completed product ready for printing.

Plans for an LTF Technical forum, Sept. 9 and 10 are being made by

the club's educational chairman, Leonard Holzinger.

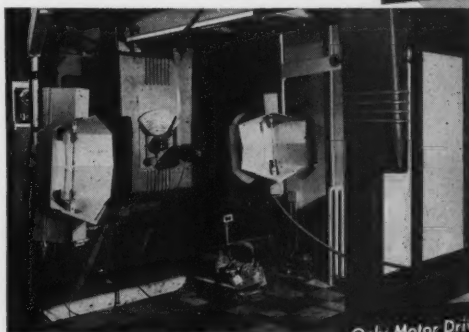
New members admitted at the June meeting are Harold Burns, John Peick, Cyril Ostendorf, Elden Johnson, and Mark Brewer.

Dayton

Hold Picnic With Craftsmen

The Dayton Litho Club participated in the annual Craftsmen—Litho

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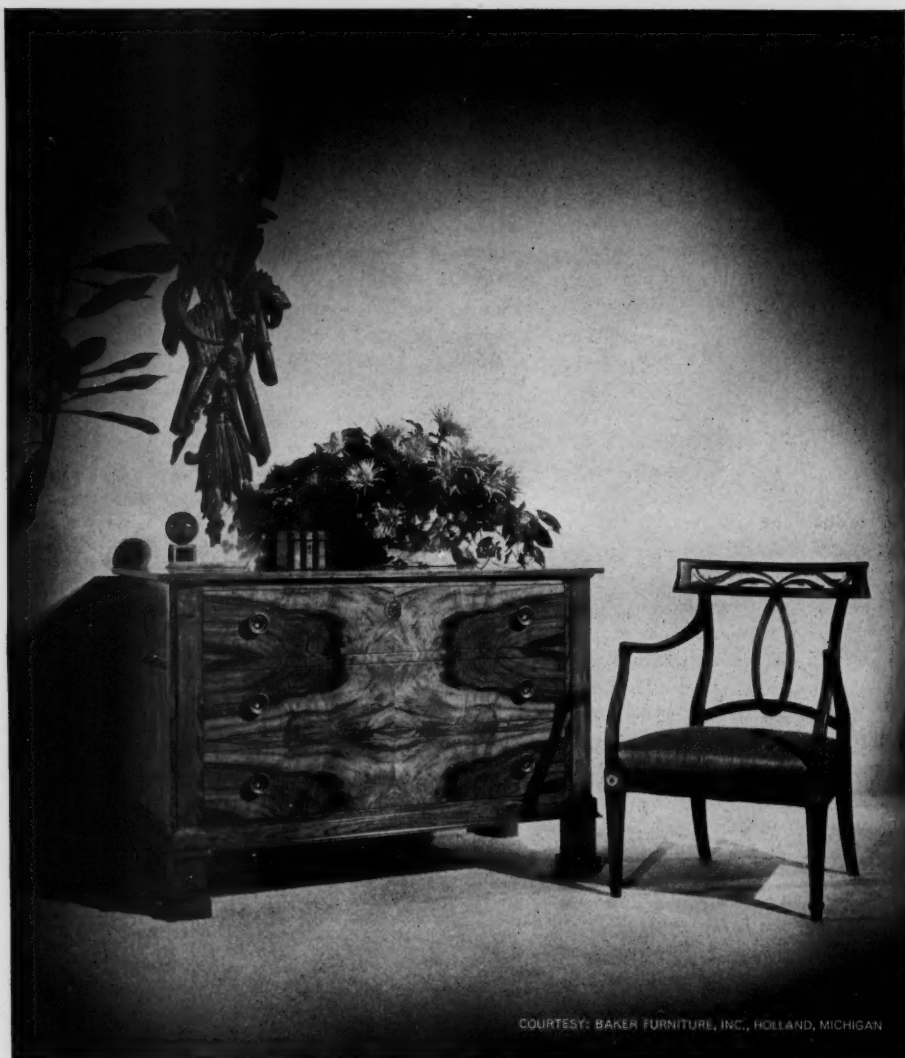
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*Inspired by a Paris Flea Market antique, this handsome Directoire chest by Baker faithfully reproduces the beautiful design, extraordinary woods, and careful handcrafting of the original. Another example of how meticulous attention to detail creates product excellence. Holds true in fine papermaking, too. That is why the people of Wausau always make sure that every sheet you receive has this special quality—
“made with extra care.”*

picnic held June 16 at Hillside Manor in Dayton. The event has become an annual social activity through the cooperation of the two associations.

Detroit

See Gravure Film

A film on the problems of merchandising and the position of the gravure process in this field was the educational feature of the June meeting of the Detroit Litho Club. The film, entitled, "Key to Merchandising", was presented by James Dunn of the Intaglio Service Corp., Detroit.

The film stressed the importance of point-of-purchase displays in today's era of the self-service market place.

Chicago

Review Litho Inks

The Chicago Litho Club, at its final educational meeting in June,

prior to the summer recess heard Wm. E. Montaux, director of manufacturing for Sinclair & Valentine Co., review the use of lithographic inks today and plans for the future. Mr. Montaux was assisted by technicians from S. & V's Chicago plant.

Next event on the club's calendar, is a golf party scheduled for Sept. 10 at the Nordic Hills Country Club, near Itasca, Ill.

Milwaukee

Annual "Sportsnite" Held

Two films entitled, "Sports Review of 1959," and "Fisherman's Paradise," were the main points of entertainment at the "Sportsnite" program of the Milwaukee Litho Club, held June 28.

The club held its annual picnic June 18, at Amann's Acres outside Milwaukee.

New members are Kenneth Scheuerman, R. G. Robbins, Jr., and Robert Stone.

St. Louis

Hear Public Printer

Raymond Blattenberger, Public Printer, was guest speaker at the June St. Louis Litho Club meeting.

The July 16 meeting of the club will be a Stag-Bar-B-Q. at Father Griffin Home Association, in St. Louis County, beginning at noon. Tickets at \$3.50 each, which includes fun and refreshments are available from Ervin O'Brien, chairman.

Baltimore

Plan Crab Feast

The Baltimore Litho Club will hold its annual crab feast at the Baltimore County Fish and Game Protective Association, on July 23.

Tickets for the event, which runs from one to six, are available from the chairman of the affair, Thomas Ford Jr., 311 Guilford Ave., Baltimore.

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Boston, Mass. Mt. Kilburn Paper Co., Inc.
Boston, Mass. Arlin Paper Co.
Empire Paper Corp.
Pilgrim Paper Co.
Shawmut Paper Co.
Brooklyn, N. Y. Price Nocks Paper Co., Inc.
Buffalo, N. Y. The Union Paper & Twine Co. Inc.
Cedar Rapids, Iowa Evans Paper Co.
Charlestown, Mass. Warren L. Wheelwright Paper Co.
Chicago, Ill. Berkshire Papers, Inc.
La Salle Paper Co.
Reliable Paper Co.
Warner Paper Co.
Cincinnati, Ohio The Chatfield Paper Corp.
Cleveland, Ohio The Union Paper & Twine Co.
Columbus, Ohio The Scioto Paper Co.
Corpus Christi, Tex. Magnolia Paper Co.
Dallas, Texas Western Paper Co.
Denver, Colo. Jensen Paper Co.
Des Moines, Iowa Newhouse Paper Co.
Detroit, Mich. The Union Paper & Twine Co. of Mich.
Fernwood, Pa. Pontiac Paper Co.
Fort Worth, Texas Western Paper Co.
Freeport, Ill. Arrow Paper Co.
Galesburg, Ill. Wilson Paper Co.
Galveston, Texas Magnolia Paper Co.
Grand Rapids, Mich. Grand Rapids Paper Co.
Great Falls, Mont. Great Falls Paper Co.
Green Bay, Wis. Steen Macek Paper Co.
Hicksville, N. Y. Capstone Paper Co.
Houston, Texas Magnolia Paper Co.
Indianapolis, Ind. The Chatfield Paper Corp.
Jackson, Mich. The Union Paper & Twine Co.
Jackson, Miss. Barefield Paper Co.
Kansas City, Kan. Wyco Paper Co., Inc.
Kansas City, Mo. B & J Paper Co.
Los Angeles, Calif. Columbia Paper Co.
Lubbock, Texas Western Paper Co.
McAllen, Texas Magnolia Paper Co.
Madison, Wis. Westport Paper Co.
Milwaukee, Wis. Reliable Paper Co.
Sensenbrenner Paper Co.
Minneapolis, Minn. Minn. Paper & Cordage Co.
Moline, Ill. Carlson Brothers
Monroe, La. Bancroft Paper Co.

Nashville, Tenn. Clements Paper Co.
Natchez, Miss. Bancroft Paper Co.
Neenah, Wis. Sawyer Paper Co.
New Orleans, La. Sam A. Marks & Co.
New York, N. Y. Perkins-Goodwin Co.
Oakland, Calif. Bayside Paper Co.
Phoenix, Ariz. Grand Canyon Paper Co.
Pine Bluff, Ark. Smith Paper Products Co.
Pittsburgh, Pa. Brubaker Paper Co.
Portland, Ore. The Chatfield & Woods Co. of Pa.
Portland, Ore. Paper Mills Agency of Ore.
Providence, R. I. Roberts Paper Co.
Rochester, N. Y. The Printers Supply House
Rockford, Ill. Northland Paper Co.
St. Louis, Mo. Shaughnessy-Kniop-
Hawe Paper Co.
St. Paul, Minn. Minnesota Paper & Cordage Co.
San Diego, Calif. Columbia Paper Co.
San Francisco, Calif. Wilson-Rich Paper Co.
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MODERN LITHOGRAPHY, July, 1960

121

READERS:

Are you taking full advantage of your lithographic magazine?

THE staff of *Modern Lithography* has been trying, in several important ways, to make the pages of your magazine more valuable to you. Increased in-person coverage of litho club and trade association meetings has been one way. Interpretative articles on subjects of vital interest to you is another. That's the reason for our recent series on presensitized plates, three-color direct separation, and visits to typical litho shops and for our expanded coverage of the litho news in all parts of the United States and foreign countries.

Our climbing circulation figures indicate your appreciation of our efforts. But are you taking *full* advantage of your lithographic magazine? In past months, many of you have availed yourself of the services of our two regular columnists, *Frank Arbolino* (Press Clinic) and *Herbert P. Paschel* (Photographic Clinic). The purpose of this page is to remind you that if you have a troublesome problem regarding press or camera, these specialists are ready to help you solve it. If you are a subscriber to ML and have a question why not jot it down on the coupon below and send it along to us? We'll be glad to help you, and the service is free.

MODERN LITHOGRAPHY

Box 31, Caldwell, N. J.

☐ Mr. Arbolino
(Press)

☐ Mr. Paschel
(Photography)

My Question: _____

(Questions will not be answered by mail, but in an early issue of *Modern Lithography*)

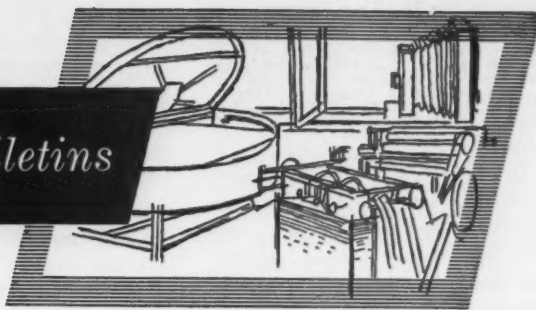
((Only your initials will be used))

Name

Company

Address

Equipment, Supplies, Bulletins



Log Etronics Introduces Scanner

A new color scanning device for use in electronically correcting densities in photographic copy has been introduced by Log Etronics, Inc., Alexandria, Va.

The unit utilizes a moving-spot light source similar to the light in a television tube. Scanning the photographic negative to be used in making an enlarged print, it varies in brightness automatically as it moves across the picture.

The enlarger then automatically and electronically "dodges" to vary densities.

The unit reportedly does for each picture what the human eye does when looking at a scene partly in shadow and partly in bright sunlight. "The iris in the eye narrows when looking at brightness, opens up when looking at shadows. A camera which takes an original picture cannot make this adjustment, but com-

promises on one setting between the two extremes," the company explained.

According to the company, the enlarger, making a print from the negative, does the adjusting of light within the picture itself, to bring out detail actually recorded by the camera but usually lost in printing.



Tougher Offset Book Covers

Dupont Co., has introduced a new bookbinding material which reportedly will be durable and retain lithographed cover designs for extended periods despite constant handling and rough treatment.

Called vinyl clad PX cloth, the new material is a combination of three components: (1) vinyl-impregnated book cloth; (2) a specially formulated primer coat; and (3) a clear protective film designed specifically for use on book covers.

The process is a method of laminating the specially compounded film, Fabrilite V-2, to lithographed vinyl

PX cloth. This is done after the vinyl PX cloth is pretreated with the primer coat.

The company has applied for a patent to cover the process and will issue royalty-free licenses to recognized laminators. Initial production of covers for commercial distribution is being planned through five laminating firms who are receiving the guidance of DuPont representatives.

Magnetic Inks in Color

California Ink Co., San Francisco, has introduced a new development in the magnetic ink character recognition field in the form of three mag-

netic inks in color—red, brown and green.

The company has also published a question and answer booklet on magnetic ink character recognition. It is available from the company at 545 Sansome St.

Folder on Litho Chemicals

Anchor Chemical Co., Inc., 827 Bergen St., Brooklyn 38, N. Y. has published a new "Litho-Products" folder.

The eight page, two color, folder, illustrates and briefly describes all Anchor Chemicals particularly designed for the lithographer. Copies are available from the company.

Introduce Web Register System

A new pre-register system for Harris-Cottrell web offset presses has been introduced by the Cottrell Co., a subsidiary of the Harris-Intertype Corp.

Designed to reduce makeready and assure accuracy of register, the new system uses a punch and pin method to pre-register plates and control register from camera room to the printed sheet.

The only equipment necessary is a special 3-hole register punch and a 3-pin strip, plus the key register plate bender. The punch is used to position holes in each goldenrod before the negatives are stripped up, and in each plate before exposure. The strip controls register on both the light table and in the vacuum printing frame, with three pins controlling register when the punched plate is placed on the bender. Each plate is then bent to the same alignment and locked in register on the plate cylinders.

Further information is available from the Cottrell Co. Westerly, R. I.

Feature 25x38" Two-Color

A booklet giving full details on its new two-color 25x38" offset press is now available from the Harris-Seybold division of Harris-Intertype Corporation.

The 20-page, plastic bound booklet, illustrated with photographs and drawings, describes the six main press operations—feeding, registering, dampening, inking, printing and delivery. Also included are specifications and floor-plan diagrams.

Copies are available without charge from the company at 4510 East 71st St., Cleveland 5, O.

Quick Change Plate Clamps

Paper plate clamps, which reportedly make paper plate changes in less than 30 seconds possible have been developed by Royal Zenith Corp., New York. The new clamps are available for all three sizes of the company's offset presses.

Among the advantages of these easy-on plate clamps cited by the company is that they allow the use of direct image paper plates, making offset possible on jobs requiring immediate printing from standing type or line cuts without the time-consuming processing through camera, and stripping.

The front clamp holds the paper plate by an eccentric motion, while the tail-end clamp, with spring-loaded

hook bar, will maintain constant tension on the plate even after it has been wet and stretched. For special jobs, the new clamps may also be adapted for use with two half-plates in place of a single full-size one.

ATF Program-Matic Booklet

A new 24-page booklet describing in detail the ATF Program-Matic system control attachments for 1250 Multiliths, ATF Chief 15's, and Whitin Masterliths is now available on request from American Type Founders Co., 200 Elmora Ave., Elizabeth, N. J., or any of its branches.

The Program-Matic, according to the booklet, is an automatic control attachment that can be installed within an hour on standard small offset presses and duplicators.

The attachment is designed specifically for plants which do systems work, short-runs, repetitive work, and work requiring accurate count control.

Two New Booklets From Kodak

A revised edition of a six-page pamphlet, "Physical Characteristics of Kodak Glass Base Plates," No. Q-35, is now available without charge from Eastman Kodak Co., Rochester, N. Y.

The pamphlet stresses the dimensional stability of glass which makes

it useful as a base for photographic emulsions in critical applications where such stability is of great importance.

Information on thicknesses, sizes, and quality of glass plates available from the company has been brought up to date in the pamphlet. It also lists and describes specifications which can be supplied on special order.

A Kodak Graphic Arts Data Book which explains techniques of making color separation negatives from reflection copy is available now in a revised edition from the company. Its list price is \$1.

The 48-page publication contains illustrations which have been modified for more clarity, and up-to-date information on current products and procedures which are available or being developed.

Called "Color Separation from Reflection Copy," publication No. Q-4, it is available through Kodak graphic reproduction dealers or from the company.

Box Manual Available

The Folding Paper Box Association of America is now making its Mechanical Cartoning Equipment Manual available to anyone interested in mechanical carton filling. Formerly its sale had been restricted to association members only. Contents of the loose-leaf manual include process flow charts, illustrating typical complete packaging lines, complete and up-to-date descriptions of specific machinery and other data useful to box makers. It is distributed from the FPBAA headquarters at 222 West Adams St., Chicago.

Cover Papers Featured

A new sample book for Atlantic cover papers has been issued by the Eastern Fine Paper and Pulp Division, Standard Packaging Corp., Bangor, Me. Featured in the new book are samples of complete line of cover grades—Atlantic Cover, Atlantic Opaque Cover, Atlantic Pastel Cover.

The book is available from the company at the address given above.

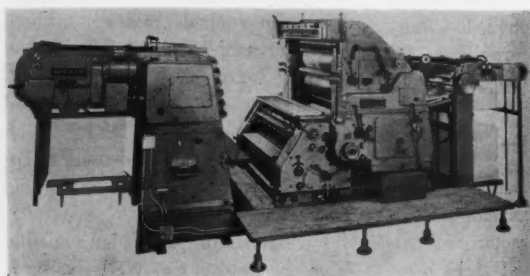
Miehle Introduces New 25" Two-Color Offset Press

A new 25" two color press, reportedly the same in operating features as its 29" and 38" two color presses, has been introduced by The Miehle Co., Division of Miehle-Goss-Dexter, Inc., Chicago.

The new press, is said to handle sheets from 11x16" to 20x26" at

speeds up to a maximum of 7500 per hour.

Among the advantages listed by company are: continuous operation; swing gripper infeed; common impression cylinder; running register control; large form rollers; and good accessibility.



Miehle's New
25" Two-
Color Press

LOOKING AHEAD

(Continued from Page 117)

cal Foundation. This was the first notable printing group research effort, and it continues to be the greatest printing group research effort in this country. It is credited with not only improving offset lithography, but for setting a pattern for progressive printing research. Some feel it is the "daddy" of all printing research efforts.

3. In the early '30s, the smaller lithographic printing presses were introduced.

4. Development of a method to continuously coat paper at the end of a paper making machine was brought about to make a "Life Magazine" possible.

5. Improvements in printing techniques and procedures are best demonstrated by the *Saturday Evening*

Post. To the reader of the *Post*, there is a notable improvement between the issues of 1901 and 1930 in paper, printing and legibility. The improvement between 1930 and 1960 may not be so apparent to the untrained eye, but it is, nonetheless, real. The use of color in the *Post* increased on a ratio of 1 to 4 between 1930 and 1960.

6. The increasing use of telephone directories and mail order catalogs made necessary the development of a new and faster method of binding—called "glue back" or "perfect binding." For such uses, this binding method obsoleted thread-and-wire bound books. It also made possible the millions of 25 cent paper covered books available today wherever books are sold.

15 Post-War Years

During the 15-year post-war period of 1945 to 1960, there has been more administrative and technical progress in printing than in the previous 50 years.

1. Perhaps the greatest single factor is the trade association. Such groups are a leading nucleus from which printers exchange ideas with one another and with their supply men for the betterment of all. Trade associations have been particularly helpful in the areas of selling, cost accounting, administration and, now, technical management.

2. The improvements in lithography and paper making—much of them resulting from LTF—demonstrated that lithography from a wrap-around plate on a rotary-type press out-produced the conventional letterpress flat-bed methods and is now challenging the faster letterpress rotary methods.

3. Other industries, looking for new sales opportunities for their products, are approaching the fertile field of printing through the avenues of research. Du Pont, Minnesota Mining, Eastman, and Fairchild are but a few in this group.

(Continued on Page 127)

Used by the top Graphic Arts camera manufacturers

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GOERZ ● ARTAR

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- Hard coated air spaced optics
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Midwest Distributor: WHITE PHOTO SALES, INC., Chicago 13, Ill.

Canadian Distributor: W. E. Booth Company Limited, 12 Mercer St., Toronto, Can.

MAP CONTRACT WORK

(Continued from Page 29)

extremely low bids are the result of the contractor not making a sufficient pre-bid inspection of material. Many contractors also find it of considerable value for future bidding, to send a representative to attend bid openings and make a transcript of all the bid action.

The Contracts Analysis Branch, Quality Analysis Division, offers these suggestions to new bidders:

1. Be sure to make a complete study of work required and material furnished at AMS prior to your bid. Observe representative time estimates shown with difficult type contract lots.
2. Be sure to make complete and correct statements

CHICAGO DESIGN SHOW

(Continued from Page 44)

STA exhibition. This poster is one of the most impressive pieces in its class."

Some of the finest examples of the lithographer's art appear in the field of folders and brochures, Mr. Seay went on. Among others he mentioned five:

"Dayalets," (Photo 3) produced by Inland Lithograph for Abbott Laboratories. Designed by Norman Herman under art director Chas. Walz Jr.

"Another Great Year," (Photo 4) produced by Rayner Lithographers for American Osteopathic Assn. Designed by Ed and Jane Bedno.

"Chymar Buccal," (Photo 5) a Peerless Litho production, for Armour Pharmaceutical Co., Designed by Paul Sieber and Donald Walkoe.

CENSUS

(Continued from Page 42)

basis. While traditionally, the annual survey of manufactures has not shown geographic distribution of product class information, my own experience in some special geographic tabulations has indicated that for a very nominal cost, the data can often be broken down geographically at least into regions.

I also should like to make the recommendation that your industry continue its interest in preserving all the progress that has been made to date so that your industry will know each year at least the amount of product information shown in this chart. If you don't get the information by tying into this across-the-board survey of manufacturers, a program already in existence and designed to attain representation from all manufacturing segments of the economy, I don't know how you can get it without terrific expense.

You might even want to establish a statistical committee which would meet regularly—say at least once a year—to review the government statistics available to

with your bid, concerning plant capacity and personnel.

3. Please consider that you are bidding on color work requiring highly critical register and handle the job in your plant accordingly. Set up a regular job schedule for your maps to prevent administrative tie-up and technical tie-up. (Jobs have been taken off the press and stacked to provide for rush commercial work and later found to have become a register problem due to press or paper change.)

Here is a relatively new and interesting market for lithographers. If the situation is approached intelligently and good management and plant liaison are maintained between the contractor and AMS, such work might well become one of your most popular accounts.

Lithographers interested in receiving invitations to bid should contact Contracting Officer, Army Map Service, 6500 Brooks Lane, Washington 25, D.C.★

"Parenteral Administration," (Photo 6) lithographed by E. F. Schmidt Co. for Abbott Labs. Designed by Charles Walz and Carl Regehr.

Hayward R. Blake, president of STA, declared the show was "a useful record of the year's accomplishments" and "an inspiring means for promoting good taste, restatement of values and other manifestations of the principles for which the STA stands."

Mr. Walz charged that "most entries used type and illustrations in decorative and unrelated arrangements." If type and illustrations are integrated in a direct, logical way, he said, "it will do a better communicating job."

More than 10,000 persons viewed the exhibit. For printers and advertising groups, students and others the STA has prepared a color slide exhibit of all certificate winners which is available at a nominal rental fee. The Society can be contacted at 6 East Lake St., Chicago 1, Ill.★

your industry, and to make certain that government is adequately informed about your needs. Probably, equally as important, such a committee could give us your technical advice on definitions and new products and processes coming into the picture.

One more comment in closing, and that is that the results of the 1958 Census of Manufactures, when published in final form during the course of the summer, will be aimed principally at satisfying the greatest number of needs for statistics—that includes government, industry, research organizations, and the student. At a very nominal cost, these data may be rearranged to answer specific questions. This cost is nominal because most of the expense has already been incurred in collecting the initial reports, proving the information reported, and introducing it into the electronic computer record.

It has been one of my most pleasant experiences to have worked with your industry, principally through your associations, and with the trade press, in overhauling the statistics about printing. The cooperation you gave the Census is what made it possible to give you new and better data and I trust that this will only be a milestone for the future.★

LOOKING AHEAD

(Continued from Page 125)

4. Printers and their closely related suppliers, observing the tremendous success the lithographers were obtaining from LTF's findings, set up research centers of their own. It is estimated that current active projects number more than 1,500 in some 150 formal laboratories. The newly established Research & Engineering Council of the Graphic Arts, although not engaged in research itself, has a significant role in identifying problems to be solved and in indicating the direction which research should take.

5. Population growth, habits of people, and new demands from business in general tremendously increased the need for more printing. For support of this statement, I call your attention to the packaging industry. Printing on labels and packages now serves as a sales promotional medium as well as identifying the package contents. This is applicable to food products in the supermarkets as well as cartons of nylon!

6. In the meantime, the Education Council of the Graphic Arts Industry has assisted some 150 to 200 vocational and college level schools to intensify the drive on technical and administrative training. In addition, I am informed, some 100 state-supported colleges now train printing teachers.

7. Although illustrations have been printed in color in the *Milwaukee Journal* since 1891 and in the *Chicago Tribune* since 1903, it was not until the current post-war period that illustrations in color became everyday occurrences across the country. For instance, the *Philadelphia Inquirer* began running colored illustrations in 1950.

These increased demands for printing are being met through:

- Developing and improving management skills—and this applies to all levels from president to foreman.

- Printing craftsmen, who like their brothers in other industries, have increased their proficiency through specialization. As may be expected, the specialists are in the larger plants and the all-around craftsmen continue in the smaller plants.

- Practically all the numerous mechanical facilities and supplies, which

offer opportunities for improvement of considerable magnitude in both quality and productivity of printing.

Mechanical Facilities

Without the improved mechanical facilities, the cost of printing would be prohibitive and there would be large unfilled gaps in the demand for printing. This, in turn, would retard

GOLDENPLAST*

A new ORANGE masking plastic for layouts that

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*GOLDENPLAST masking plastic—new formulated medium, replacing Goldenrod papers for those difficult "hard-to-register" jobs.

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14"	x 17"	100	12.00	46"	x 56"	50 55.50
16"	x 20"	100	14.00	48"	x 60"	50 62.00
20"	x 24"	100	20.50	54"	x 60"	50 65.00
20"	x 27"	100	22.00	-----		
24"	x 27"	100	30.00	ROLLS		
24"	x 30"	100	31.50	54" x 100 ft. \$ 25.00		
27½"	x 31"	100	38.50	54" x 200 ft. 48.00		
27"	x 38"	100	41.00	54" x 500 ft. 112.00		
30"	x 40"	100	48.00	F.O.B. N. Y., Our Plant		
38½"	x 54"	50	41.50	* All Prices Subject to Change		
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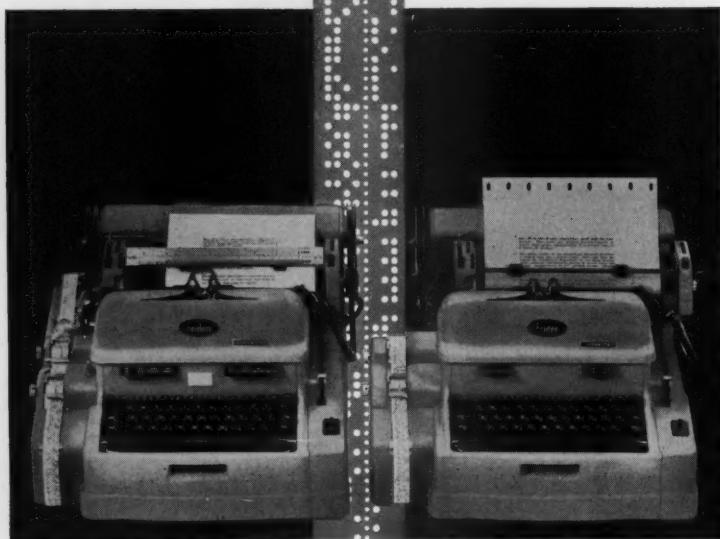
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other businesses which could not afford higher priced printing.

• Further, it is apparent that the bindery operations of modern printing plants have been undergoing great changes in both methods and mechanics.

Technical Future

The fields of chemistry, photography, and electronics are influencing printing processes beyond the researchers' dreams of two or three decades ago. They give every evidence of holding the technical key to the future.

Oils, inks, rollers, blankets, paper coatings, adhesives, plastics, photo-sensitive materials, and chemicals are playing dramatic roles in bettering quality and in helping to keep costs within the reach of all who use printing.

Printing leaders are so impressed with photo-mechanical developments (and this includes electronics) that they freely envision the technical future of printing to be photo-mechanical. I believe it is appropriate to "high spot" two phases which are of importance:

1. *Phototypography*—This, as you know, means the setting of type on photographic film instead of in hot metal. While the first patents for mechanically setting type on film were issued in 1896, the first production machine was not installed until 1946. An estimated 4 per cent of type is now set directly on film and the volume is growing as fast as this new process can be integrated into the industry.

Words and Pictures

The function of printing is to multiply words and pictures. All printing processes begin with type and illustrations, and the nature of the two elements sets the quality and procedural pace for the rest of the process. Thanks to developments of photography, these elements are significantly being improved and will get better in the future.

2. Many of you have heard about DuPont's "Dycril" photopolymer

going on
vacation?

fine, but remember,
the smart lithographer
can't afford to take
a vacation from all
the up-to-date
news and articles about
the offset industry.

so, play it safe . . .

you won't miss a thing

if you read ML

every month.

And, if you're inter-
ested in a bargain
for the key men
in your shop,
see page 115 in
this issue.

**MODERN
LITHOGRAPHY**
Box 31 Caldwell, N. J.

Leader in the Litho Field

printing plate. While "Dycril" is still in the early commercial stage, predictions indicate that "Dycril" and its competitors will help increase printing production by better utilization of the rotary principle of printing which has many advantages over the slow speeds with flat-bed equipment.

Electronics Department

We don't need to stretch our imagination very far to visualize that, before long, printers may have an electronics department for such purposes as scanning manuscripts, proofreading, typesetting, negative making, counting, and a host of other operations.

Finally, the future of printing is shining bright because it is essential to both commerce and communication. Imagine getting along without the product of printing for a single moment in your working life!★

ADVENTURE MAP

(Continued from Page 51)

Houston and San Jacinto Battleground, bayshore tour, arts to zoo romp and freewaying to Galveston. The map outlines the streets, distances and directions in each case. The city recently erected 58 signs to serve as guideposts for tourists following the trails.

Creative Lithography

The Adventure Map, aside from being a fine advertisement for the offset process, represents an excellent job of creative lithography which gives every indication of paying dividends to Premier Printing and Letter Service.★

WATER, WATER

(Continued from Page 34)

the device is rather expensive, running around \$300 per inch of distance across the press. In the second place, a considerable amount of

**More than 1,500
satisfied readers!**



. . . are you one?

Yes, more than 1,500 progressive lithographers have bought "The Magic of Making Halftones" in the past few months. Many have written to tell us how much they have profited from this practical, profusely illustrated book. It covers the complete subject of making offset halftones—tools, procedures, equipment, general rules and shop standards. Do you have your copy?

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- Scores of photos showing 'right' and 'wrong' • Working tools: where to buy them and how to make them
- Setting camera • Focusing • Rescreening halftones • Shooting colored copy • Stripping • Platemaking • Special tricks

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(Check must accompany order.)

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| American Zinc Institute | Lanston Monotype Company |
| Amsterdam Continental, Types & Graphic Equipment, Inc. | Leedal, Incorporated |
| Anchor Chemical Co., Inc. | Litho Chemical & Supply Company, Inc. |
| Paul Anderson Manufacturing Co. | Lithoplate, Inc., Subsidiary of Harris-Intertype Corporation |
| Anso, A Division of General Aniline and Film Corp. | LogEtronics, Inc. |
| Atlas Stencil Files Corporation | Ludlow Typograph Company |
| Azoplate Corporation | Macbeth Arc Lamp Company |
| Russell Ernest Baum, Inc. | Macbeth Daylighting Corporation |
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| Caprock Developments | Natural Lighting Corporation |
| Carbons, Inc. | Nekoosa-Edwards Paper Co. |
| Chesley F. Carlson Company | Norman-Willets Graphic Supply Company |
| Chemco Photoproducts Co., Inc. | nuArc Co., Inc. |
| Consolidated International Equipment and Supply Co. | Ortman-McCain Company |
| Consolidated Water Power & Paper Company | Oxford Paper Company |
| Continental Printing Equipment Company | Oxy-Dry Sprayer Corporation |
| Craftsman Line-Up Table Corporation | E. C. Palmer & Company, Division of Western Newspaper Union |
| Custom Studios | Harold M. Pitman Company |
| Davidson Corporation | Polychrome Corporation |
| Dewey and Almy Chemical Division, W. R. Grace & Co. | Printers Sales Idea Service Co. |
| Di-Noc Chemical Arts, Inc. | Printing Developments, Inc. |
| Direct Reproduction Corporation | Printing Production Magazine |
| The Douthitt Corporation | Process Cameras & Equipment, Inc. |
| E. I. du Pont de Nemours & Co., Inc. | R B & P Chemical & Supply, Inc. |
| Eastman Kodak Company | Recordak Corporation |
| Electronic Mechanical Products Company | Repro Graphic Machines, Inc. |
| Encyclopaedia Britannica | Riegel Paper Corporation |
| Fairchild Graphic Equipment | Roberts & Porter, Inc. |
| Filmotype Corporation | Robertson Photo-mechanix, Inc. |
| Fluorographic Sales Div., Printing Arts Research Laboratories | Harry H. Rogers Company, Inc. |
| Foster Manufacturing Company | Roll-O-Graphic Corp. |
| Gane Brothers & Lane, Inc. | Royal Zenith Corporation |
| William Gegenheimer Company, Inc. | Rutherford Machinery Co., Division of Sun Chemical Corporation |
| Jos. Gelb Company | RycoLine Solvent and Chemical Company |
| General Plate Makers Supply Company | H. Schmidt & Company |
| General Printing Ink Company, Division of Sun Chemical Corporation | The Separon Co. |
| The Gevaert Company of America, Inc. | Sinclair and Valentine Co., Division of American-Marietta Company |
| C. P. Goerz American Optical Company | The Strong Electric Corporation |
| The M. P. Goodkin Co. | Sun Chemical Corporation |
| Graphic Arts Employment Service | Ulanos Graphic Arts Supplies, Inc. |
| Graphic Supply Co., Inc. | Unitronics, Inc., Sub. of Lanston Monotype Co. |
| Halber Corp. | Van Son Holland Ink Corporation of America |
| Hamilton Manufacturing Company | Vari-Typer Corporation |
| Hulen Line-Up Table Company | Varn Products Co., Inc. |
| Philip A. Hunt Company | S. D. Warren Company |
| Ilford, Inc. | W. M. Welch Manufacturing Company |
| The Institute for Printing Sales | Western Litho Plate & Supply Co. |
| Interchemical Corporation, Printing Ink Division | Western Newspaper Union |
| Jomac, Inc. | Western Paper of Omaha, Division of Western Newspaper Union |
| Kemart Corporation | |
| Kenro Graphics, Inc. | |

National Association of Photo-Lithographers
 317 West 45th Street New York 36, N. Y.

power is required to operate the system. In the third place it is extremely noisy. In the fourth place the velocity of the air used to cut down the water film is so great that the very least bit of dirt in the system converts it into a very highly efficient blasting machine that quickly destroys the image. This last disadvantage is met by the use of very efficient filters. These are so efficient, in fact, that they do keep all foreign particles out of the air stream but, in doing so, plug up very quickly and therefore require a considerable amount of maintenance.

In closing, I think it is important to stress the fact that the lithographic process is still based on an ink-water relationship. In the foreseeable future it does not appear that this will change. The answer is not, as some people would have us believe, in a different process. (For example, dry offset which, in my opinion, is even wetter than conventional lithography.) The answer lies in continued research and engineering.

As a matter of fact, the success of the Dahlgren system has resulted in an extremely forceful jabbing of the press manufacturers to come up with some real accomplishments in the field of improved dampening mechanisms and systems. It is conceivable, however, that the answer may lie in a different direction. While this is a remote hope, it is believed in some circles that with man's present knowledge of chemistry and related sciences we ought soon to be able to develop a plate whose nature is essentially lithographic, but whose performance would not depend on the mutually repellent nature of water and ink.★

WEB-OFFSET

(Continued from Page 47)

ever-improving quality level in gravure printing. This method has been the leader in producing long run supplements and catalogs for many years.

* * *

We might as well face facts—progress is a necessity not a luxury.

Ultimately we not only compete with letterpress and gravure but we also compete with media other than printing. Color television is making serious inroads in the advertiser's budget. If we lose ground, it is our own fault.

It makes sound business sense, therefore, for us to invest many times more research dollars in two directions. First, to allocate dollars for research in our own plants in order that we may produce our particular products more efficiently under our own conditions.

* * *

When we speak of investing research dollars in our own plants, we do not mean hiring a white-coated laboratory technician who will prepare a thesis, plotting the best way to print in the year 1990. Research in our industry is most effective when each of us tries to improve his own production by the application of common sense and imagination plus a sprinkling of courage.

Whenever we say "this has been the way we have done it up to now and why rock the boat" we are hampering research and digging our own business graves.

* * *

The second phase of research that is basic, cannot be done within our own plants. It is easy to picture the value of basic research if we measure the savings on recent accomplishments.

1. How much paper has been saved by electronic register controls?
2. How much money has been saved with paper dampeners?
3. How much has production been improved by the flying pasters?
4. How much bindery time has been saved by the packer box?

I am sure that no one plant has ever solved these problems alone. It is always done as a result of collective thoughts of many minds.

Since web-offset is growing fast, a lot of money is going to be wasted fast. What would it be worth to web-offset if we could:

1. Discover a method of getting color proofs as economically as letter-

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An Encyclopedic two volume 1200 page treatise dealing with every phase of lithography. Written by 70 top authorities Edited by Victor Strauss Profusely illustrated. Large sections in four color process, three color and Bourges process.



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Arctic Lodges twin motored DC3 or C46 charter planes will fly your customers and executives directly to the lodge airstrip with one stop for customs and gas.

Top sportsmen, writers and experienced fishermen acknowledge Reindeer Lake to be the finest fishing spot in Canada.

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press can produce them on a four-color Vandercook proof press?

2. What is the ideal temperature and relative humidity for best printability?

3. Should dirt and slitter dust be brushed off on 30-inch rollers in our plants or wouldn't it be easier to brush it off 150 inch rolls at the mill?

4. Can we develop a dampening system that controls the flow of water at least as well as we can control the flow of ink?

5. Can we find a way to get color separations as easily as Technicolor has done it for Hollywood?

* * *

The answers to this type of question will be found more economically in cooperative basic research. How do you feel about establishing a budget of \$250,000 a year within an existing research group like the Lithographic Technical Foundation if this money can save our industry \$2 million a year and more?

If we allocate \$1 per ton of paper, 1/2 cent per lb. for ink, 10 cents per press blanket, and 1 per cent of the cost of new equipment, we could raise that kind of money, and we would hardly feel the cost—yet the benefits would result at once. This is the planning needed today for a better web-offset tomorrow.

* * *

The rewards of organized printing research can be verified by Time, Inc., who have expanded their Springdale Research Laboratories, and in the very process of helping their own efficiency, they have served the entire printing industry. Perhaps the one lesson we should all learn from them, is *never* to be satisfied with things as they are—there is always a better way and we must be alert to find it. Smugness and complacency can ruin a business just as surely as they can endanger our own security as a nation.

* * *

The only way to stimulate progress is to encourage new methods. We here sincerely believe that the web-offset process is one of the most promising developments in the graphic arts today. The growing at-

tendance at our annual meetings provides eloquent proof of the increased interest in this new method. Publishers especially need more color, faster production, tighter schedules, and lower costs. Web-offset is today able to offer these features to many of them, and remember—it is still a growing boy. With the help of modern research it may well become a giant in the graphic arts industry of tomorrow.★

QUALITY CONTROL

(Continued from Page 39)

which can be used to check quickly any pullover on the sheet. In his company the idea has been developed to the point where a scale is shot onto the side of the plate so that any shift can be quickly noted and measured simply by checking the scale which prints on every sheet.

To check paper stretch and plate contact, Mr. Pollner said that his company prepares a plastic overlay

sheet the size of the piece being printed, on which are marked a set of register marks corresponding to those on the job. At any point during the run a press sheet may be pulled and measured with the plastic overlay to ascertain any deviation.

As a final point, Mr. Pollner said his company tests all incoming paper shipments to see if they are in proper condition for running. If the paper is not properly conditioned it is placed in a seasoning chamber until it is ready.

Mr. Morgan covered color quality control in his plant under the topic "Quality Standards in Lithography." He said that in establishing a control system in his plant, it was found that a lack of definition of tone and color values made an adequate control unworkable.

In order to make a system of control practicable, it was necessary to develop a common denominator in tone and color values. This was done by simply setting up a series of 15 tones, each having a different dot size, and each having a given read-

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ing on a densitometer. In a further step, a color chart was prepared in which various colors are identified according to the value of each of the process colors which make them up.

Color Chart

With such a chart prepared, it is possible to refer to any color by a specific number or numbers and be assured that anyone who sees these numbers will be able to tell exactly what are the various values in the color. Therefore, it is possible to control a color or colors throughout the entire production process.

When a job is received in Mr. Morgan's plant, colors in the original copy are assigned a number according to the chart. These then become the control numbers for the entire production process. In the camera room, plateroom, or pressroom any questions can be quickly settled by referring to the values given for that number in the chart.

Mr. Bianco, speaking on "Color Control in the Pressroom," said that "many control problems can be eliminated in the pressroom by establishing proper controls in the preceding steps, from copy preparation onward."

A method for color control with inks, cited by Mr. Bianco, is the preparation of a file of ink formulas for colors previously used and a file of standard ink color formulas. In this way a given color can be prepared with a minimum of mixing and testing.

In the U. S. plant, he said, quality control inspectors get an OK sheet

of the job being run at the beginning of the press run. Thereafter, they get a press sheet for every 2,000 run, if the job is larger than 50,000. If the run is under 50,000 they get one sheet for every 1,000 run.

After getting the sheet the inspector cuts a strip from the center. The strip is then run through a color eye machine which scans the copy and indicates any variations. These defects are then reported to the pressman who makes the proper corrections.

Mr. Bianco said that his company has been printing color blocks in unused portions of the sheet in order to maintain better control over colors which are running.

Mr. Johnson, in reply to a question said that, in his plant, which employs 156 persons, running 12 presses, there are three persons working full time in the quality control section.

Mr. Pollner in answer to another question, said that there are scanners being developed to test color variations on the press.

Mr. Bianco noted that quality control "can be established on any size run, since it takes only 50 or 100 sheets to get the process running."★

MOTIVATIONS

(Continued from Page 45)

1. Be a supervisor—not a snooper-visor

Employees produce more when given some degree of freedom in the way in which they perform their tasks.

When they are too closely supervised, production tends to fall off.

2. Be interested in people.

Supervisors of units with high production have a greater concern for the welfare of their subordinates than do supervisors of less productive units.

3. Permit employees, where possible, to share in the making of decisions.

4. Spend more time planning and organizing and less time doing routine tasks.

5. Look for and remove the cause of errors.

6. Let subordinates know what the score is.★

PRODUCTION CLINIC

(Continued from Page 53)

how fast it sets. The ink will set in a few minutes on some papers. If such is the case, chalking will result unless enough long varnish is used in the drier, because it is the drier that causes crystallization.

Drying colors too rapidly very often causes trouble. Even the most experienced men get into trouble because of unforeseen delays. If something should happen to a plate or for any other reason the job is delayed, or if you are using only one press to print a long run job, you should plan on mixing your ink with a 10-12 hour drying time. This can be done by the use of a little long varnish and an appropriate amount of drier. Under these conditions the ink is sure to dry, but never so hard that the job cannot lie a day or even two without crystallizing.★

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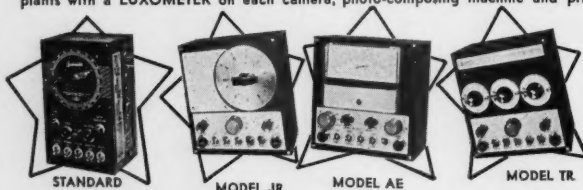
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
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Copy closing date, tenth of the preceding month.

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Plant Manager—4 & 5 col. presses exp. in multicolor offset & letterpress Gravure exp. desirable N.Y.—\$18,000-\$20,000
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Foreman—Offset Prep. Dept. INDIANA—\$7,500-\$9,000
Estimators—Offset OHIO—\$7,500-\$8,000
Production Manager—Bus. Forms MIDWEST—\$8,000-\$10,500
Salesman—Printing OHIO, MICHIGAN, WISC.—\$6,000-\$8,000

WANTED: Cameramen, platemakers, strippers, pressmen, compositors, proofreaders, monotype, folder operators, binderymen, offset pressmen.

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SITUATIONS WANTED:

WANTED: a progressive lithographer who is looking for a technical specialist to assume responsibility for plant improvement in methods, standards and control, with emphasis on color. Box 692, c/o MODERN LITHOGRAPHY.

GRAPHIC ARTS TECHNICIAN interested in position with manufacturer or supplier as technical representative, or in product development and field testing. Background includes lengthy practical experience in printing production, research, plant modernization and product development. Address Box 693, c/o MODERN LITHOGRAPHY.

PRODUCTION AND ESTIMATING CONTROLLER, Retired Graphic Arts Consultant will accept a part-time job with a reliable offset company. Reply Box 694, c/o MODERN LITHOGRAPHY.

OFFSET READER-DETAIL MAN—Check brownprints, ozalids, etc. against dummies, art, mechanicals and imposition layout for color breakup, completeness, accuracy of stripping and opaquing, defects. Also check press sheets. Considerable experience in nationally known quality letterpress and offset shop. Box 695, c/o MODERN LITHOGRAPHY.

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Investigate Misuse Charges

A committee of the Allied Printing Trades of Toronto is investigating the charges of George Hendry, a teacher at Central Technical School, that the school's printing shop is being misused.

Mr. Hendry charges that he and other teachers at the school sometimes had to suspend classes to do printing jobs for the school, wasting many hours of actual teaching time.

He said that students were given study periods while the teachers completed jobs.

Robert McCormack, president of the Toronto Typographical union, and chairman of the investigating committee, said that the committee plans to meet with the board of education.

Pneuma-Flo Appoints Taub

Pneuma-Flo Systems, Inc., New York, has appointed Herbert L. Taub as sales engineer.

He was formerly with Sinclair and Valentine Co.

THEODORE C. LEOPOLD has been promoted to assistant sales manager of Edward Stern & Co., Philadelphia Lithographic Company.



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Installations

The following firms have recently installed new Harris offset presses.

American Offset Corp., New York—model 677, 52½ x 77, six-color.

Queens Lithographing Corp., Long Island City, N. Y.—model 477, 52½ x 77, four-color.

Graphic Arts Process Co., Detroit—model 477, 52½ x 77, four-color.

Arkansas Printing and Lithographing Co., Little Rock—model 238, 25 x 38, two-color.

Radio Printing Corp., Bridgeport, Conn.—model 236, 23 x 36, two-color.

Litho Art, Inc., Detroit—model 238, 25 x 38, two-color.

Printing Service Co., Dayton, O.—model 238, 25 x 28, two-color.

American Greeting Elects Stone

Irving I. Stone, who began his career in the greeting card industry at the age of nine, has been elected president of American Greetings Corp., Cleveland, the largest producers of lithographed greeting cards in the country.

Mr. Stone succeeds his father, Jacob S. Sapirstein, who founded the firm in Cleveland in 1906. Mr. Sapirstein will remain as chairman of the board of directors.

Fogg Is New PIC Pres.

Joseph G. Fogg, Judson-Brooks Co., Cleveland, has been elected president of the Printing Industry of Cleveland. Mr. Fogg has been a member of the PIC Board since 1956. Other officers are William L. Cope, Jr., Stratford Press, vice president; W. Carl Schafer, Penton Publishing, treasurer; and George Richard Lezius, Lezius-Hiles, secretary.

All four officers will serve on the board of directors, along with William Feather, Jr., William Feather Inc., Allen Frost, Copifyer; Henry Huefner, Jr., Photo Litho Plate; Melvin E. Jackman, Electric Printing; Thomas Roberts, A. S. Gilman; and Kenneth Steingass, Buehler Printcraft.

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INDEX to ADVERTISERS

A

Aljen Associates June
Allied Paper Corp. May
Aluminum Company of America... June
American Speed Light Corp..... June
American Type Founders.....8, 9, 60, 118
American Writing Paper Corp..... 19
Anchor Chemical Co., Inc..... June
Anso 11
Appleton Coated Paper Co..... June
Arctic Lodges, Inc..... 132
Aristo Grid Lamp Products, Inc..... June
Azoplate Corp. 78

B

Bartels Co., Gordon..... June
Baum, Inc., Russell Ernest..... 134
Beckett Paper Co.....71, 72
Bell-Hortensine Co., The..... 134
Bingham's Sons, Sam'l, Mfg. Co.... June
Boyd, H. S., Co..... 6
Bridgeport Engravers Supply Co... 113
Brown Mfg. Co., W. A..... June
Buckbee Mears Co..... June
ByChrome Co., Inc..... 134

C

Cantine Co., Martin..... June
Capital Regraining Co..... 52
Carbons, Inc. 138
Carlson Co., Chesley F..... June
Champion Paper Co.67, 68
Chemco Photo Products Co.....4th Cover
Chicago Litho Plate Graining Co... June
Colwell Litho Products, Inc..... June
Consolidated Water Power
& Paper Co. 24
Craftsman Line-up Table Corp.... May
Crescent Ink & Color Co..... 4
Cromwell Paper Co.....3rd Cover

D

Davidson Corp.2nd Cover
Di-Noc Chemical Arts, Inc..... May
du Pont de Nemours & Co.,
Inc., E. I.....14, 15

E

Eastern Fine Paper and Pulp Div.
of Standard Packaging Corp.....87, 88
Eastman Kodak Co..... 49
Electronic Mechanical Products Co.. 136

F

Flint Ink Corp..... June
Friden, Inc. 128

G

Gans Ink and Supply Co.....110A, 110B
Gegenheimer Co., Wm..... 16

General Printing Ink Co., Div. Sun
Chemical Co. June
General Research and Supply Co.... June
Gevaert Co. of America, Inc., The.. 21
Godfrey Roller Co..... June
Goerz American Optical Co., C. P.. 125
Goodyear Tire and Rubber Co..... 7
Graphic Arts Corp. of Ohio June
Graphic Supply Co., Inc..... June
Grumbacher, M., Inc..... 138
Gurin-Rapport Co..... June

H

Hamilton Mfg. Co..... June
Hamilton Paper Co..... June
Hammermill Paper Co.....81, 82
Hantscho Co., Inc., George..... 54
Harris-Seybold Div., of Harris-
Intertype Corp. 50
Hill Rubber Co..... 136
Howard Paper Co..... June
Hunt, Philip A., Co..... 76

I

Ideal Roller Co.....69, 70
Ilford, Inc. 18
Interchemical Corp. June
International Paper Company..... June

J

Jomac Products 79

K

Kendall Mills 23
Kimberly-Clark Corp. May
KLM Royal Dutch Airlines 140

L

Litho Chemical & Supply Co..... 74
Lithoplate, Inc. June
Ludlow Paper Co..... 10
Ludlow Typograph Co..... June

M

Manhattan School of Printing..... 138
Miehle Co., The, Div. of Miehle-
Goss-Dexter, Inc. June
Miller Printing Machinery Co..... 22
Minnesota Mining &
Manufacturing Co.99-102

N

Nashua Corporation106, 107
National Association of
Photo-Lithographers 130
National Carbon Co., Div. of Union
Carbide Co. 17
Nekoosa-Edwards Paper Co..... 90-95
New York & Pennsylvania Co. May

nuArc Co., The..... 117
Norman-Willets Graphic Supply Co.. June
Northwest Paper Co.....97, 98

O

Offen & Co., B..... 138
Oxford Paper Co..... June
Oxy-Dry Sprayer Corp..... June

P

Paper Manufacturers Co..... June
Pitman, Harold M., Co..... 26
Polychrome Corp. May
Printing Machinery Co., The..... June

R

Rapid Roller Co..... June
RBP Chemical & Supply, Inc..... June
Riegel Paper Corp..... 136
Rising Paper Co..... June
Roberts, Inc., Lewis..... June
Roberts & Porter, Inc..... 3
Royal Zenith Corp..... June
Rutherford Machinery Co., Div. of
Sun Chem. Co. 58

S

Saltzman, Inc., J. G..... June
Schmidt, H., & Co..... 20
Schultz Deep Etch Chemicals....134, 138
Scriber Specialties June
Sheridan, The, T. W. & C. B., Co... June
Siebold, Inc., J. H., & G. B..... June
St. Regis Paper Co..... 111
St. Louis Plate Graining Co. 133
Stark Laboratories, John..... June
Strathmore Paper Co.....103, 104
Stevenson Photo Color Co..... 135
Strong Electric Corp., The..... 119
Supreme Photo Supply Co..... 66

T

Teitelbaum Sons, Inc., N..... 132
Tobias, Philip, Associates..... 136

U

Union Bag-Camp Paper Co.....109, 110
United States Envelope Co..... June

W

Wagner Litho Machinery Div..... 62
Warren Co., S. D.....12, 13
Wausau Paper Mills Co.....120, 121
West Virginia Pulp and Paper Co...84, 85
Western Gear Co..... 25
World Color, Inc..... June

Y

Young Brothers Co..... June

(The advertisers' index has been accurately checked but no responsibility can be assumed for errors or omissions)

TALE ENDS

THE rash of mergers that has marked lithographic activity in New York and Chicago in the past few years spread to Philadelphia late last month with confirmation by Zabel Bros. Co. that a deal is in the works between that 75-year-old firm and Ketterlinus Lithographic Mfg. Co., 118-year-old company. The resultant company would be in the \$8 million a year category. (For details, see news story, page 77.)

The youthful spirit of Sol Berg, of J. H. and G. B. Siebold Co., New York, lured us into an error last month in the news item about his wedding anniversary celebration. Sol proudly reported to us that he and his lovely wife have been married not 25 but 50 years. Come to think of it we should have figured that it would be a little difficult to have a great grandchild after only 25 years of marriage, but at deadline time our arithmetic isn't always at its keenest!

The idea that "billboards are the art gallery of the public," a proposition that has been rather strenuously disputed in several quarters in recent years, was given a real boost last month, when General Outdoor Advertising Co., Inc., unveiled a giant reproduction of Ruben's famous Self Portrait at the GOA annual meeting in Flemington, N. J. The company will display the reproduction, along with 8 x 15' reproductions of such other masterpieces as the Mona Lisa, Blue Boy, Song of the Lark and Lavinia, on billboards in several cities. We hope the Mona Lisa gets safely mounted before some over-enthusiastic adman attaches copy explaining that the old girl is afraid to show her teeth when she smiles because she can't brush three times a day!

The notion that the Technical Association of the Graphic Arts has been known to refuse papers because they were couched in understandable English was discounted by several technical men at last month's annual meeting in Washington as just a cynical theory bandied about by the trade press. A number of TAGA members, in fact, swore that they could understand most of the technical discussions, and some of the reporters present even seemed to be on the same wave length as a few of the speakers.

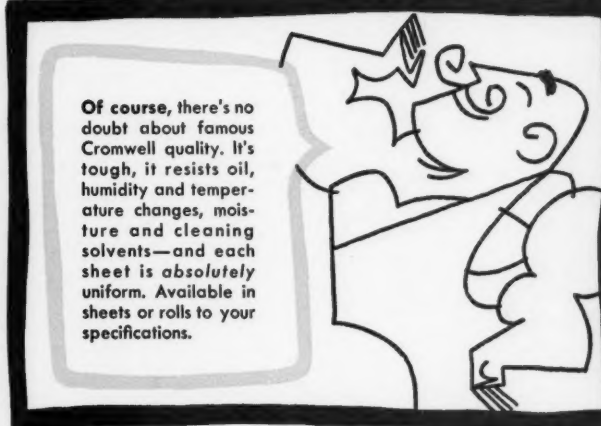
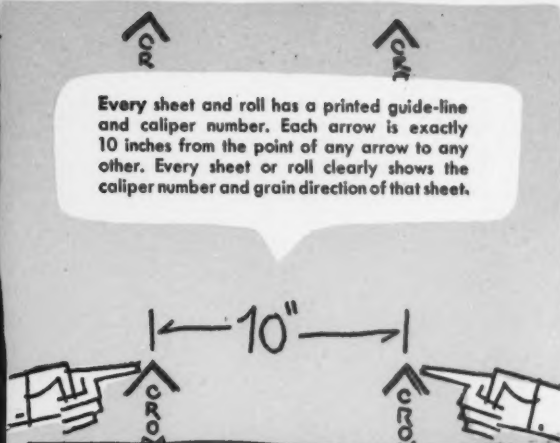
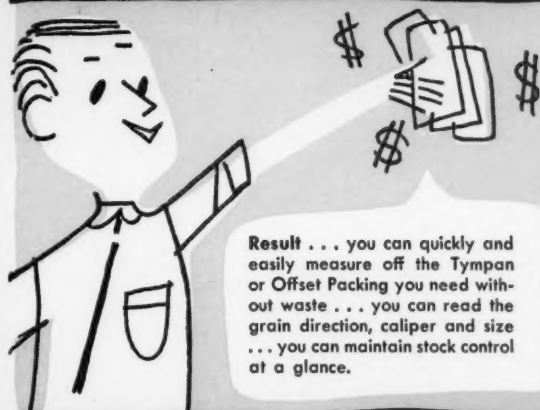
Seriously, TAGA is to be commended for its initial effort to reduce the complex talks to language of the layman. This was attempted at a special panel arranged in conjunction with the Washington Litho Club. And, while the informal discussions could hardly be described as of the "shirtsleeve" variety, many of the lithographers expressed gratification for the program. (We have the feeling that a number of technical men, too, got more out of some of the panelists' "translations" than they did from the actual talks.) It might be well to make such programs a regular feature of these meetings.

Phil Tobias, outgoing president of TAGA, and panel moderator, told the story of the newlywed who bought 17 yards of material to make a nightgown; explaining to the sales girl that her husband, a research man, was more interested in looking for things than in actually finding them."★



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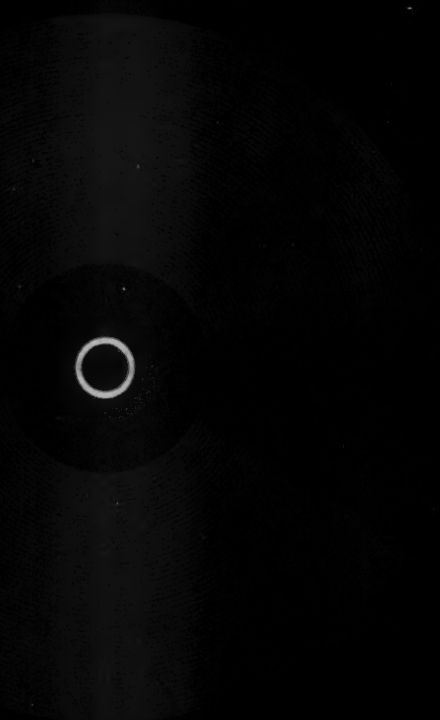
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